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WICHE

Special report on assessing
financial need of WICHE students

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MONTANA UNIVERSITY SYSTEM

AND POST SECONDARY EDUCATION

SPECIAL REPORT ON ASSESSING FINANCIAL NEED OF WICHE STUDENTS

(For Presentation to the 44th Legislative Assembly)

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SPECIAL REPORT ON ASSESSING FINANCIAL NEED OF WICHE STUDENTS

(For Presentation to the 44th Legislative Assembly)

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INTRODUCTION

House Bill 746, passed by the 43rd Legislative Assembly, requested the Commissioner of Higher Education to examine the financial needs of the students in the WICHE, WAMI and Rural Dentistry programs. The bill requested that:

> "The Commissioner of Higher Education shall devise procedures to assess financial need of students applying for the benefits provided by WICHE, WAMI, and Rural Dentistry Program. These procedures shall be presented to the 44th Legislative Assembly in conjunction with the budget request for WICHE, WAMI, and Rural Dentistry Program support funds."

In conjunction with this request, a survey was taken of WICHE-aided students in April, 1974 to determine the extent of the financial need of the students in the program. Second, an examination of the health manpower situation in Montana was made with emphasis on the WICHE program's impact on the situation. Third, an analysis of current systems of assessing student financial need was made to gauge the administrative impact of a needs test. The results of these inventories are found in Chapters two, three, and four. Chapter one provides a brief overview of the three programs.

January, 1975

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CHAPTER I

THE ROLE OF WICHE, WAMI AND RURAL DENTISTRY

The Western Interstate Commission for Higher Education (WICHE) was created in 1951 and began its program activities in 1953. Article I of Section 75-4901 of Montana law states the reasons for creating the WICHE Student Exchange Program. It states:

> "WHEREAS, the future of this nation and of the western states is dependent upon the quality of the education of its youth; and
>
> WHEREAS, many of the western states individually do not have sufficient numbers of potential students to warrant the establishment and maintenance within their borders of adequate facilities in all of the essential fields of technical, professional, and graduate training, nor do all of the states have the financial ability to furnish within their borders institutions capable of providing acceptable standards of training in all of the fields mentioned above,"

Thirteen western states currently cooperate in the student exchange program. The programs Montana participates in as a sending state are medicine, dentistry, veterinary medicine, dental hygiene, physical therapy, occupational therapy, optometry, and podiatry. Montana is a receiving state in forestry, law, and pharmacy.

While the WICHE program is characteristically viewed as a student assistance program, a more proper term would be an "educational opportunity" program. A WICHE student does not receive any direct financial assistance in the form of cash or loan. The WICHE funds flow directly to the educational institution which accepts the Montana student. The Montana WICHE student pays all ordinary and necessary tuition and other miscellaneous fees except the non-resident portion of the fees.

A more important feature of the program is that the certified WICHE student is placed on a higher priority list when admissions are being deterimined.

Some institutions reserve a given number of student positions for WICHE applicants. This aspect of the program is what enables Montana students to gain admission to the health education programs in the thirteen western states.

The support fees are established by the WICHE commissioners from the participating states. The current support fees are:

	Approved Support Fee for Students Entering Prior to 1975-76	Support Fees for Students Entering 1975-76 and After
Medicine	$5,000	$6,000
Dentistry	4,000	6,000
Veterinary Medicine	4,000	6,000
Dental Hygiene	1,000	2,000
Physical Therapy	1,200 +Clinical	2,800
Occupational Therapy	1,200 +Clinical	2,800
Optometry	1,200	3,600
Podiatry	2,500	4,800
Law	2,500	
Graduate Library	2,500	
Forestry	1,500	
Pharmacy	2,500	
Graduate Nursing Education	2,500	
Public Health	2,500	

The demand for WICHE support has increased each year. Requests for certification during the 1974-75 year were as follows: 74 in the field of medicine, 26 in dentistry, 19 in dental hygiene, 14 in physical therapy, 3 in occupational therapy, 52 in veterinary medicine, 14 in optometry, and 2 in podiatry. From the total of 204 students certified, 59 were accepted by WICHE schools for the fall quarter of 1974.

W.A.M.I.

The University of Washington Medical School in 1971, with the assistance of federal grants, developed the WAMI program to provide for greater enrollment of medical students from Washington, Alaska, Montana and Idaho. This program differs from the WICHE program in that the students take the first

year of their basic science requirements at a participating university in their home state and return to the University of Washington for the balance of the curriculum. However, during the last two years, the students receive part of their clinical education from a private physician in a non-metropolitan community. This training provides educational experiences to the student in family medicine, pediatrics, internal medicine, obstetrics and gynecology and also provides additional health manpower often needed in small communities.

During each of the 1973-74 and 1974-75 school years, 10 Montana students began their schooling under this program at Montana State University. The full implementation of the program will provide for 20 students per year beginning in fall, 1975.

Minnesota Rural Dentistry Program

The 1971 Legislature passed legislation which authorized the State of Montana to negotiate and enter into agreements with states outside the WICHE Compact to provide for the placement of Montana students in various programs of higher learning.

The University of Minnesota Dental School requested participation in such a program and accordingly eight Montana students were accepted into the University of Minnesota Rural Dentistry Program for the 1974-75 school year. The 1974 Legislature appropriated funds to support the program. This particular program places emphasis on returning dentists to the rural communities of Montana. Support fees were the same as for the WICHE program in 1974-75. The future support fee will be more closely related to actual cost of education.

CHAPTER II

WICHE Student Exchange Program

Technical Report on Financial Need

Before proceeding with an analysis of the desirability of a needs test for participants in the WICHE Student Exchange Program, it is essential that a thorough examination of actual student financial need be conducted. To gather the necessary data, a survey was constructed in April of 1974 to provide the most realistic measurement of the financial need of students receiving WICHE assistance. The survey was administered to 188 Montana students participating in the Student Exchange Program. Of the surveys distributed, 132 were returned in a usable form. The response forms were coded and analyzed at the Montana State University Computing Center using a computer language (SPSS) developed by the National Opinion Research Corporation and Stanford University for analysis of social survey data. The statistical examination provided frequency distributions for nominal and ordinal data items, means for interval data items, cross tabulations of variables, and general analysis of variance and regression tables. When a statistically significant effect was found, further statistical analyses were perfomed to measure the depth and predictability of the significance.

Demographic Characteristics of Respondents

Several questions were asked that were designed to give a demographic portrait of the respondents. Examination of the demographic question responses indicated that the survey sample was reasonably representative of the real population of WICHE Students. Table I indicates the general response to the demographic inquiries. For clarity, the table lists the characteristic, the total number of respondents in a particular category, the actual percentage of respondents in various categories (based on the entire sample population), the adjusted percentage of respondents in various

categories (based on percentage of those answering the particular question; missing data was not included), and cumulative percentage (based on the adjusted percent figure).

Table I

Breakdown by Demographic Characteristic

Characteristic	Total	Percentage	Adjusted Percentage	Cumulative Percentage
Sex				
Male	108	81.8%	81.8%	81.8%
Female	24	18.2	18.2	100.0
State Attending				
Arizona	3	2.3	2.3	2.3
Colorado	34	25.8	25.8	28.0
Idaho	2	1.5	1.5	29.5
Nevada	1	.8	.8	30.3
New Mexico	1	.8	.8	31.1
Oregon	30	22.7	22.7	53.8
Utah	4	3.0	3.0	56.8
Washington	39	29.5	29.5	86.4
Wyoming	3	2.3	2.3	88.6
California	13	9.8	9.8	99.2
Minnesota	1	.8	.8	100.0
Curriculum				
Medicine	45	34.1	34.4	34.4
Dentistry	14	10.6	10.7	45.0
Vet. Medicine	41	31.1	31.3	76.3
Dental Hygiene	8	6.1	6.1	82.4
Physical Therapy	4	3.0	3.1	85.5
Occup. Therapy	2	1.5	1.5	87.0
Optometry	16	12.1	12.2	99.2
Podiatry	1	.8	.8	100.0
Missing Data	1	.8	----	-----
Marital Status				
Single	73	55.3	55.3	55.3
Married	56	42.4	42.4	97.7
Divorced	3	2.3	2.3	100.0
Age				
19	1	.8	.8	.8
20	2	1.5	1.5	1.5
21	15	11.4	11.4	13.5
22	24	18.2	18.2	31.8
23	21	15.9	15.9	47.7
24	23	17.4	17.4	65.2
25	19	14.4	14.4	79.5
26	11	8.3	8.3	87.9
27	5	3.8	3.8	91.7
28	4	3.0	3.0	94.7
29	2	1.5	1.5	96.2

Table I (cont.)

Characteristic	Total	Percentage	Adjusted Percentage	Cumulative Percentage
Age (cont.)				
30	2	1.5	1.5	97.7
34	1	.8	.8	98.5
35	1	.8	.8	99.2
37	1	.8	.8	100.0
Mean = 24.008		Standard Deviation = 2.753		Standard Error = .240
No. of Dependents				
0	76	57.6	57.6	57.6
1	37	28.0	28.0	85.6
2	10	7.6	7.6	93.2
3	4	3.0	3.0	96.2
4	4	3.0	3.0	99.2
5	1	.8	.8	100.0
Mean = .682		Standard Deviation = 1.036		Standard Error = .090
Dependency Status				
Emancipated	88	66.7	66.7	66.7
Dependent	44	33.3	33.3	100.0
Father's Occupation				
Professional and Technical	30	22.7	24.2	24.2
Farmers	25	18.9	20.2	44.4
Managerial	17	12.9	13.7	58.1
Sales	8	6.1	6.5	64.5
Craftsman	7	5.3	5.6	70.2
Operatives	7	5.3	5.6	75.8
Service	9	6.8	7.3	83.1
Farm Labor	1	.8	.8	83.9
Retired or Umemp.	20	15.2	16.1	100.0
Missing Data	8	6.1	-----	-----
Mother's Occupation				
Professional and Technical	25	18.9	19.5	19.5
Farmer	1	.8	.8	20.3
Managerial	5	3.8	3.9	24.2
Clerical	12	9.1	9.4	33.6
Sales	2	1.5	1.6	35.2
Craftsman	1	.8	.8	35.9
Service	4	3.0	3.1	39.1
Housewife	75	56.8	58.6	97.7
Retired or Unemp.	3	2.3	2.3	100.0
Missing Data	4	3.0	----	-----

Table I (cont.)

Characteristic	Total	Percentage	Adjusted Percentage	Cumulative Percentage
Do parents own home?				
Yes	108	81.8	83.7	83.7
No	21	15.9	16.3	100.0
Missing Data	3	2.3	----	-----
No. of Siblings Attending College				
0	64	48.5	48.5	48.5
1	42	31.8	31.8	80.3
2	21	15.9	15.9	96.2
3	2	1.5	1.5	97.7
4	1	.8	.8	98.5
5	1	.8	.8	99.2
7	1	.8	.8	100.0
Missing Data	0	0.0	----	-----
Other Siblings				
0	19	14.4	14.4	14.4
1	28	21.2	21.2	35.6
2	32	24.2	24.2	59.8
3	23	17.4	17.4	77.3
4	11	8.3	8.3	85.6
5	9	6.8	6.8	92.4
6	6	4.5	4.5	97.0
7	1	.8	.8	97.7
8	1	.8	.8	98.5
9	2	1.5	1.5	100.0

Mean = 2.417 Standard Deviation = 1.922 Standard Error = .167

Characteristic	Total	Percentage	Adjusted Percentage	Cumulative Percentage
Practice Type				
Clinic	40	30.3	33.9	33.9
Private	57	43.2	48.3	82.3
Other (Undecided)	21	15.9	17.8	100.0
Missing Data	14	10.6	----	-----
Do You Plan to Practice in Montana?				
Yes	105	79.5	84.0	84.0
No	3	2.3	2.4	86.4
In Northwest	9	6.8	7.2	93.6
Undecided	8	6.1	6.4	100.0
Missing Data	7	5.3	----	-----

Demographic Cross-Tabulations

Cross-tabulations of the demographic data were performed both to define the sample more narrowly and to determine which demographic characteristics were statistically associated.

As Table I indicated, about 80% of the survey respondents were male. Essentially because of the differences in curricula offered at the various WICHE institutions, there is wide variation in the female population from state to state. Table II indicates the state by state breakdown.

Table II

Breakdown of Students by Sex

State	% of Montana WICHE Students	Total % of WICHE Males	Total % of WICHE Females	% of Male Stu. In-State	% of Female Stu In-State
Arizona	(3)* 2.3%	(3)* 2.3%	(0)* 0.0%	100.0%	0.0%
Colorado	(34) 25.8	(28) 25.9	) 6) 25.0	82.4	17.6
Idaho	(2) 1.5	(0) 0.0	(2) 8.3	0.0	100.0
Nevada	(1) .8	(0) 0.0	(1) 4.2	0.0	100.0
New Mexico	(1) .8	(0) 0.0	(1) 4.2	0.0	100.0
Oregon	(30) 22.7	(29) 26.9	(1) 4.2	96.2	3.3
Utah	(4) 3.0	(3) 2.8	(1) 4.2	75.0	25.0
Washington	(39) 29.5	(33) 30.6	(6) 25.0	84.6	15.4
Wyoming	(3) 2.3	(0) 0.0	(3) 12.5	0.0	100.0
California	(13) 9.8	(10) 9.3	(3) 12.5	76.9	23.1
Minnesota	(0) .8	(1) .9	(0) 0.0	100.0	0.0
TOTAL	100.0	100.0	100.0	-----	-----

* Figure in parenthesis indicates actual number of students

Chi Square = 37.60336 with 11 degrees of freedom (significant at the 1% level)
Contingency coefficient = .47086
Kendall's Tau Beta = .04995
Gamma = .097204

The breakdown of curriculum by sex also indicates statistical differences between males and females -- more so than the breakdown of sex by state. Table III provides a breakdown of curriculum by sex.

Table III

Breakdown of Curriculum by Sex

Curricula	& of WICHE Students Participating		% of Total WICHE Males		% of Total WICHE Females		% of Males In Curricula	% of Females In Curricula
Medicine	(45)*	34.4%	(37)*	34.6%	(8)*	33.3%	82.2%	17.8%
Dentistry	(14)	10.7	(14)	13.1	(0)	0.0	100.0	0.0
Vet. Med.	(41)	31.3	(36)	33.6	(5)	20.8	87.8	12.2
Den. Hygiene	(8)	6.1	(0)	0.0	(8)	33.3	0.0	100.0
Physical Ther.	(4)	3.1	(2)	1.9	(2)	8.3	50.0	50.0
Occup. Ther.	(2)	1.5	(1)	.9	(1)	4.2	50.0	50.0
Optometry	(16)	12.2	(16)	15.0	(0)	0.0	100.0	0.0
Podiatry	(1)	.8	(1)	.9	(0)	0.0	100.0	0.0
TOTAL		100.0		100.0		100.0	-----	------

* Indicates actual number of students

Chi Square = 47.68 with 7 degrees of freedom (significant at the 1% level)
Contingency Coefficient = .51657
Kendall's Tau Beta = .08373
Gamma = .16339

The following table represents the breakdown of sex by marital status. The table indicates that statistically a higher percentage of males participating in WICHE aid are married than females participating in the program.

Table IV

Marital Status by Sex

Marital Status	% of WICHE Students	% of WICHE Males	% of WICHE Females	% of Males In Category	% of Females In Category
Single	(73)* 55.3%	(58)* 53.7%	(15)* 62.5%	79.5%	20.5%
Married	(56) 42.4	(49) 45.4	(7) 29.2	87.5	12.5
Divorced	(3) 2.3	(1) .9	(2) 8.3	33.3	66.7
TOTAL	(132) 100.0	(108) 100.0	(24) 100.0	-----	-----

* Indicates actual number of students
Chi Square - 6.23 with 2 degrees of freedom (significant at the 5% level)
Contingency Coefficient = .212
Kendall's Tau Beta = -.04023
Gamma = -.09949

Table #5 indicates a breakdown of state by curriculum. Differences from state to state are reflected -- obviously because of the differences in curricula and cost. However, the table helps to provide a picture of WICHE student location patterns in various curricula. The top figure is the raw percentage; the lower figure is the column percentage.

Table V

Enrollment: State by Curriculum

State	Med.	Dent.	Veter. Med.	Dental Hygiene	Phys. Ther.	Occup. Ther.	Optom.	Pod.
Arizona	(3)* 100.0% 6.7	(0)* 0.0% 0.0	(0)* 0.0% 0.0	(0)* 0.0% 0.0	(0)* 0.0% 0.0	(0)* 0.0% 0.0	(0)* 0.0% 0.0	(0)* 0.0% 0.0
Colorado	(10) 29.4 22.2	(0) 0.0 0.0	(23) 67.6 56.1	(0) 0.0 0.0	(0) 0.0 0.0	(1) 2.9 50.0	(0) 0.0 0.0	(0) 0.0 0.0
Idaho	(0) 0.0 0.0	0.0 0.0	0.0 0.0	100.0 25.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
Nevada	(1) 100.0 2.2	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0
New Mexico	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(1)100.0 12.5	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0
Oregon	(8) 26.7 17.8	(6) 20.0 42.9	(0) 0.0 0.0	(1) 3.3 12.5	(0) 0.0 0.0	(0) 0.0 0.0	(15) 50.0 93.8	(0) 0.0 0.0
Utah	(4) 100.0 8.9	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0
Wash.	(14) 35.9 31.1	(6) 15.4 42.9	(18) 46.2 43.9	(1) 2.6 12.5	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0
Wyoming	(0) 0.0 0.0	(1)100.0 7.1	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0
California	(5) 41.7 11.1	(1) 8.3 7.1	(0) 0.0 0.0	(0) 0.0 0.0	(4) 33.3 100.0	(0) 0.0 0.0	(1) 8.3 6.2	(1) 8.3 100.0
Minnesota	(0) 0.0 0.0	(1)100.0 7.1	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0	(0) 0.0 0.0

* Indicates actual number of students
Chi Square - 317.328 with 77 degrees of freedom (significant at the 1% level)

A significant statistical association was found between curriculum and marital status, as reflected in Table VI. Again, the row percentage is the upper figure; the column percentage is the lower figure.

TABLE VI

Curriculum by Marital Status

	Marital Status		
Curriculum	Single	Married	Divorced
Medicine	(33)* 73.3	( ) 24.4	(1) 2.2
	45.8	19.6	33.3
Dentistry	(6) 42.9	(8) 57.1	(0) 0.0
	8.3	14.3	0.0
Veter. Medicine	(11) 26.8	(20) 70.7	(1) 2.4
	15.3	51.8	33.3
Dental Hygiene	(7) 87.5	(0) 0.0	(1) 12.5
	9.7	0.0	33.3
Physical Therapy	(2) 50.0	(2) 50.0	(0) 0.0
	2.8	3.6	0.0
Occup. Therapy	(2) 100.0	(0) 0.0	(0) 0.0
	2.8	0.0	0.0
Optometry	(11) 68.8	(5) 31.3	(0) 0.0
	15.3	8.9	0.0
Podiatry	(0) 0.0	(1)100.0	(0) 0.0
	0.0	1.8	0.0

* Indicates actual number of students
Chi Square = 34.23 with 14 degrees of freedom (significant at the 1% level)
Contingency Coefficient = .45519

Crosstabulations of the question "Where do you plan to practice after completing your education?" showed no significant statistical associations with any of the demographic characteristics. In other words, the desire to return to Montana was uniform across state, curriculum, sex, marital status, and the other demographic characteristics.

Cost of Education

The primary objective of the survey was to determine the actual cost of education in order that a determination of financial need might be made. Both direct educational costs -- defined in the survey as registration fees, books and other direct educational expenses -- and indirect costs -- housing, food, medical and dental costs, transportation, clothing, child support, recreation, and other expenses -- were sought by the questionnaire (see actual survey for

actual questions).

The responses to the specific items were totaled, and added to produce average costs. Costs were then broken down by demographic characteristic to determine areas of high and low cost. Analysis of variance and multiple regression tests were performed when appropriate to determine if significant differences and correlations existed.

The average total cost of education -- including both direct and indirect costs -- for the students participating in the survey was $6,382.187. The range of reported cost varied significantly with the lowest reported cost being $1,721.00 and the greatest cost being $14,441.00. These differences were due to a variety of factors -- curricula, residence, marital status, number of dependents, and other factors. Some students, for example, resided at a relative's home -- which effectively eliminated housing and food expense. Other students were faced with the burden of up to five dependents. The following tables break down the total cost of education by various demographic characteristics to present a clearer picture of the factors contributing to educational cost.

Males incurred a higher average cost of education than females -- although the difference was not statistically significant. The average total cost to the male WICHE student was $6,595.164 as compared to a cost of $5,370.184 to the average female. The difference was essentially due to curricular differences. (see Table III) and greater dependency obligations for the males interviewed. (see Table IV) An analysis of variance and a T-test revealed that the differences in the costs were statistically insignificant.

There were no statistically significant differences in total cost of education by state indicated by an analysis of variance test. There were, however, differences from region to region in the cost of education. Table VII indicates the various averages.

TABLE VII

Total Cost of Education by State

State	Average Cost	Number of Students
Arizona	$ 4,941.332	3
Colorado	6,487.76	34
Idaho	3,759.50	2
Nevada	16,162.00	1
New Mexico	4,380.00	1
Oregon	6,358.00	30
Utah	4,664.00	4
Washington	6,272.00	39

Table VII (cont.)

State	Average Cost	Number of Students
Wyoming	4,340.00	3
California	7,829,00	13
Minnesota	6,100.00	1

Degrees of freedom between groups = 11
Degrees of freedom within groups = 120
Total degrees of freedom = 131
F = 1.8278 (insignificant)

There were no significant differences in indirect (or cost-of-living) costs between curricula. When direct and indirect costs were totaled, the differences in cost between curricula became statistically insignificant.

TABLE VIII

Total Cost of Education by Curriculum

Curriculum	Total Educational Cost	Number of Students
Medicine	$6,347.332	45
Dentistry	7,127.141	14
Veterinary Medicine	6,387.512	41
Dental Hygiene	3,821,375	8
Physical Therapy	8,467.000	4
Occupational Therapy	4,973.000	2
Optometry	6,788.000	16
Podiatry	8,808.000	1

Degrees of freedom between groups = 7
Degrees of freedom within groups = 123
Total degrees of freedom = 130
F = 1.3918 (insignificant)

A breakdown of total cost of education by marital status demonstrated that there were statistically significant differences in cost depending on marital status. Single students had the lowest average costs; married students had the second lowest; and divorced students had the highest average costs. Table IX portrays the breakdown of the total educational cost by marital status.

TABLE IX

Total Educational Cost by Marital Status

Marital Status	Average Total Cost	Number of Students
Single	$5,187.492	73
Married	7,816.285	56
Divorced	8,683,332	3

Degrees of freedom between groups = 2
Degrees of freedom within groups = 129
Total degrees of freedom = 131
Chi Square = 15.15 (significant at the 1% level)

Statistical analysis of the breakdwon of total educational cost by age revealed that there were no statistical differences in total educational cost between age groups. A multiple regression analysis similarly showed that no significant correlation existed between age and total educational cost.

Table X

Educational Cost by Age

Age	Average Total Cost	Number of Students
19	$4,488.00	1
20	5,127.00	2
21	4,188.06	15
22	4,520.29	24
23	4,789.28	21
24	6,662.82	23
25	6,568.26	19
26	7,216.54	11
27	8,405.00	5
28	8,698.75	4
29	5,960.00	2
30	9,721.50	2
34	16,162.00	1
35	5,796.00	1
37	4,259.00	1

Degrees of freedom between groups = 14
Degrees of freedom within groups = 117
Total degrees of freedom = 131
Chi Square = 2.158 (insignificant)

As expected, a significant difference in cost emerged based on the number of dependents supported by the respondent, although a regression analysis did not show a strictly linear relationship between the variables. Table XI indicates the relationship.

Table XI

Educational Cost by Number of Dependents

Number of Dependents	Average Total Cost	Number of Students
0	$ 5,333.434	76
1	7,442.00	37
2	8,582.00	10
3	7,129.00	4
4	8,010.00	4
5	15,378,00	1

Degrees of freedom between groups = 5
Degrees of Freedom within groups - 126
Total degrees of freedom = 131
F = 6.948 (significant at the 1% level)

In summary of the subpopulation analysis of the total educational cost, only two variables demonstrated statistically different means between groups: marital status and number of dependents. When both direct and indirect costs of education were considered together, then, no significant cost differences were found to exist between varying states, curricula, sex and age.

Direct Education Costs

In the previous section, both indirect and direct costs of education were totaled to give a comprehensive picture of the total cost of education. This section will deal with a sample population and subpopulation analysis of direct educational cost. This cost was defined in the survey as the sum of registration fees, book and laboratory fees, and other direct educational cost. For the

sample population, the mean direct cost of education was $2,165.886 based on 132 interviews. Statistically significant differences in direct cost of education emerged among 3 subpopulation groups: sex, state, and curricula. In the remaining subpopulation groups -- marital status, age, and number of dependents -- there were no statistically significant differences in educational direct cost.

Table XII presents the direct educational cost broken down by sex.

Table XII

Direct Educational Cost by Sex

	Mean Direct Cost	Number of Students
Male	$2,250.546	108
Female	$1,768.444	27

Degrees of freedom between groups = 1
Degrees of freedom within groups = 130
Total degrees of freedom = 131
F = 3.9885 (significant at the 5% level)

Table XIII presents the direct educational cost broken down by state. Again, the Chi Square statistic is significant at the 5% level.

Table XIII

Direct Educational Cost by State

State	Mean Direct Cost	Number of Students
Arizona	$1,636.667	3
Colorado	1,750.912	34
Idaho	1,307.000	2
Nevada	3,309.000	1
New Mexico	2,380.000	1
Oregon	2,256.133	30
Utah	1,675.000	4
Washington	2,113.974	39
Wyoming	1,712.000	3
California	3,469.077	13
Minnesota	3,800.000	1

Degrees of freedom between groups = 11
Degrees of freedom within groups = 120
Total degrees of freedom = 131
F = 3.9698 (significant at the 5% level)

Table XIV examines the direct cost of education broken down by curricula. The statistical difference measured was greater -- significant at the 1% level -- here than in the previous two tables.

Table XIV

Direct Cost of Education by Curricula

Curricula	Direct Cost	Number of Students
Medicine	$1,928,40	45
Dentistry	3,337.143	14
Veterinary Medicine	1,818.122	41
Dental Hygiene	1,619.125	8
Physical Therapy	2,693.750	4
Occupational Therapy	2,224.000	2
Optometry	2,717.812	16
Podiatry	4,845.000	1

Degrees of freedom between groups = 7
Degrees of freedom within groups - 123
Total degrees of freedom = 130
F = 8.001 (significant at the 1% level)

As previously noted, there were no significant differences in direct educational cost discerned in the other important variables.

The following tables represent the breakdown of the components of direct educational cost by demographic characteristics. Table XV indicates the population averages for the component direct costs.

Table XV

Population Means of Component Direct Educational Costs

	Population Mean	Percentage
Total direct cost	$2,165.886	100.0%
Registration fees	1,528.568	70.5
Books	536.364	24.7
Other	100.955	4.8

Table XVI

Direct Educational Cost Components
by
Demographic Characteristics

Sex	Number of Students	Registration	Books	Other
Male	108	1584.00	565.19	101.35
Female	27	1245.15	427.741	95.56
State				
Arizona	3	973.33	596.67	66.67
Colorado	34	1303.73	323.35	123.84
Idaho	2	763.00	544.00	00.00
Nevada	1	2659.00	500.00	150.00
New Mexico	1	1280.00	600.00	500.00
Oregon	30	1630.13	550.20	75.80
Utah	4	1175.00	387.50	112.50
Washington	39	1310.82	713.36	89.79
Wyoming	3	1075.00	465.33	171.67
California	13	2780.62	578.85	109.615
Minnesota	1	2900.00	900.00	100.00
Curriculum				
Medicine	45	1456.13	395.11	77.16
Dentistry	14	1661.43	1600.07	75.64
Veter. Med.	41	1300.219	386.43	131.46
Dental Hygiene	8	900.50	579.25	139.37
Physical Therapy	4	2268.75	218.75	206.25
Occup. Therapy	2	1976.500	177.50	70.00
Optometry	16	2158.31	488.18	70.31
Podiatry	1	4045.00	700.00	100.00

An analysis of variance was performed on each of the direct costs of education--registration fees, book expense, and other expense--with demographic characteristics given as main effects. The analysis indicated three areas where significant statistical differences were detected among the subclasses: registration fees by state, registration fees by curriculum, and book expense by curriculum. The analysis indicated that there were no significant statistical differences when registration fees were broken down by sex, age, marital status and number of dependents; when book expense was broken down by sex, state, marital status, age and number of dependents; and when "other" expense was broken down by state, curriculum, sex, marital status, age, and number of dependents. Table 16 indicates the significance of the difference.

Table 16

Table	Degrees of Freedom between groups	Degreees of Freedom within groups	Total d.f.	F
registration fee by state	11	120	131	5.99**
registration fee by curriculum	7	123	130	5.62**
book expense by curriculum	7	123	130	19.26**

**significant at the 1% level

To summarize the direct costs of education to the WICHE-aided student, several things must be noted. First the average direct cost of education to the WICHE student is $2165.89 per year. Approximately 70% of this expense is due to registration fees (where

WICHE aid is given). Second, there are several significant differences in direct educational cost depending on sex, curricula and the state where the school is located. A further breakdown indicated, for the most part, there differences were mostly due to differing cost in curricula.

Indirect Educational Cost

For the purposes of the survey, indirect educational cost was defined as any cost not directly associated with university expense. These costs included housing, utilities, food, medical and dental expenses, transportation, clothing, child support, and recreation. The average WICHE-aided student paid out $4,216 in indirect educational expense during the school year. Table 17 indicates the breakdown of indirect educational expense.

Table 17

Indirect Educational Cost Breakdown

Housing	$1,304.65
Food	$ 832.50
Medical and dental	$ 175.85
Transportation	$ 513.90
Clothing	$ 228.30
Child support	$ 6.44
Recreation	$ 271.54
Other	$ 883.12
Total indirect	$4,216.30

Males averaged $4344.61 in indirect educational costs while females averaged only $3601.74 in the same costs. An analysis of

variance indicated that no statistical difference existed between male and female indirect educational costs. This pattern of insignificant statistical differences held for the rest of the demographic variables. Table 18 demonstrates the averages of the demographic variable costs and provides an F statistic for each demographic grouping based on an analysis of variance test..

Table 18

Demographic char.	Average ind. cost	F statistic
Sex		1.18
Male	$4344.617	(1 d.f. bet.)
Female	$3601.741	(130 d.f. within)
State attending		1.4674
Arizona	$3304.667	(11 d.f. between)
Colorado	$4736.852	(120 d.f. within)
Idaho	$2452.500	
New Mexico	$2000.000	
Oregon	$4101.930	
Utah	$2990.000	
Washington	$4158.023	
Wyoming	$2628.667	
California	$4360.383	
Minnesota	$2300.000	
Curriculum		1.0278
Medicine	$4418.930	(7 d.f. between)
Dentistry	$3790.000	(123 d.f. within)
Vet. Medicine	$4569.387	
Dental Hygiene	$2202.250	
Physical Therapy	$5773.250	
Occupational Therapy	$2749.000	
Optometry	$4070.188	
Podiatry	$3963.000	
Marital status		15.7237 **
Single	$3114.178	(2 between)
Married	$5533.570	(129 d.f. within)
Diverced	$6445.664	

Table 18 continued

Demographic char.	Average ind. cost	F statistic
# of dependents		7.9271**
0	$3246.881	(5 d.f. between)
1	$4967.105	(126 within)
2	$6860.797	
3	$5616.500	
4	$5632.000	
5	$12403.000	
Father's occupation		1.8489
Professional and Technical	$3546.333	(8 d.f. between) (115 d.f. within)
Farmer	$4389.078	
Managerial	$3645.235	
Sales	$2787.250	
Craftsman	$5836,285	
Operatives	$3414.857	
Service	$5397.887	
Farm Labor	$2456.000	
Retired or unemployed	$5636.098	
Mother's occupation		1.8371
Prof. and Technial	$3919.120	(8 d.f. between)
Farmer	$2346.000	(119 d.f. within)
Managerial	$4106.199	
Clerical	$2620.917	
Sales	$2777.500	
Craftsman	$5075.000	
Service	$7817.500	
Housewife	$4281.453	
Retired or unemployed	$6078.664	

**indicates signif. at the 1% level

As Table 18 shows, only marital status and number of dependents significantly altered the basic cost of living. Married students averaged costs $2419 more than single students for an average academic year. Divorced students averaged indirect educational costs $892 more than married students and $3331 more than single students. An examination of the averages for each category for

number of dependents shows a wide disparity in costs between those students with four or five dependents and those with no dependents. Table 19 shows the distribution of expense among the major subpopulation groups for each of the major indirect expenses.

Table 19

Demo. char.	Housing	F	Food	F	Transport	F	Other	F
Sex		0.08		2.01		0.22		0.61
Male	$1334		$858		$521		$948	
Female	$1212		$704		$483		$518	
State		1.31		1.08		1.12		0.74
Arizona	$1540		$613		$511		----	
Colorado	$1373		$846		$486		$1385	
Idaho	$ 715		$575		$472		----	
New Mexico	$ 900		$400		$400		----	
Oregon	$1260		$850		$576		$ 743	
Utah	$1200		$610		$520		----	
Washington	$1261		$869		$484		$ 891	
Wyoming	$ 792		$744		$386		$ 333	
California	$1593		$826		$540		$ 538	
Minnesota	$ 600		$650		$350		----	
Nevada	$2475		$1800		$1320		----	
Curriculum		2.43*		1.54		0.55		0.62
Medicine	$1385		$771		$506		$1055	
Dentistry	$1436		$863		$555		$ 178	
Vet. Med.	$1296		$910		$488		$1209	
Dental Hyg.	$ 700		$543		$410		$ 125	
Physical Ther.	$1975		$1068		$581		$1250	
Occ. Therapy	$ 705		$470		$442		$ 500	
Optometry	$1211		$918		$601		$ 612	
Podiatry	$1710		$720		$700		----	
Marital Status		30.15**		28.97**		7.03**		2.59*
Single	$ 986		$632		$433		$ 521	
Married	$1704		$1080		$613		$1291	
Divorced	$1600		$1083		$608		$2000	

**-significant at the 1% level
* -significant at the 5% level
-insignificant F

Table 19 clearly shows that marital status has an extremely strong effect on housing, food, and transportation costs. The impact is so great, in fact, that the total cost of education for married students is almost $3000 greater per year than for single students. Table 20 shows the impact of dependents on indirect educational expense.

Table 20

# of dependents	Housing	F	Food	F	Transport	F
		13.8**		19.1**		9.5**
0	$1022		$647		$118	
1	$1638		$989		$204	
2	$1712		$1106		$335	
3	$1158		$1134		$345	
4	$2382		$1487		$405	
5	$2667		$2500		$337	

**F is significant at the 1% level

In summary of indirect educational costs, it should be noted that these costs form a significant portion of the WICHE student's cost of going to graduate school. This burden falls most heavily on married students and those with a large number of dependents.

How Education is Financed

Given the fact that graduate education is extremely costly, the obvious question is how the education is financed. On the survey, the students were asked to identify by percentage the sources of his educational financing. Categories of income included personal earnings, parental contribution, scholarship funds, WICHE, loans, and other government programs. The breakdown

of these percentages is given in table 21.

Table 21

Sources of Income

Personal earnings	30.96%
Parental contribution	12.74%
Scholarship (excluding WICHE)	9.09%
Loans	27.51%
Government programs	
Social Security	0.50%
A.D.C.	0.30%
G.I. Bill	1.62%
Vocational Rehabilitation	0.00%
WICHE Student Exchange Program	28.33%
Other government programs	0.63%
Other	4.30%

Thus, the WICHE Student Exchange Program is the second highest source of income to the students. Only personal earnings contribute more to the graduate education expense (at 31%). Loans also comprise a high percentage of the sources of educational funding.

There was no statistical difference in the way that males and females financed their graduate education. Table 22 shows the breakdown by sex.

Table 22

Sources of Income by Sex

Source	Total	Male	Female
Personal earnings	30.45%	32.15%	23.67%
Parental	12.74%	13.02%	11.5%
Scholarship	9.09%	8.25%	11.96%
Loans	27.51%	26.92%	30.21%
Social Security	0.50%	0.00%	2.71%
A.D.C.	0.30%	0.37%	0.00%
G.I. Bill	1.62%	1.84%	0.56%
WICHE	28.33%	26.94%	34,25%

Table 23 gives the breakdown of source of income by each major demographic grouping. The F statistic is given at the bottom of each column (for each source of income). Because of space limitations, the following letters will represent the income sources:

A = Personal earnings
B = Parental contribution
C = Scholarship (excluding WICHE aid)
D = Loans
E = Social Security
F = A.D.C.
G = G.I. Bill
H = WICHE
I = Other

	Sources of Income								
Demo. Char.	A	B	C	D	E	F	G	H	I
State									
Arizona	8%	87%	4%	0%	0%	0%	0%	---	0%
Colorado	36%	13%	6%	19%	0%	1%	4%	37%	6%
Idaho	50%	30%	0%	0%	0%	0%	0%	20%	0%
Nevada	70%	10%	0%	0%	0%	0%	0%	---	0%
New Mexico	5%	25%	20%	25%	0%	0%	0%	---	0%
Oregon	30%	12%	7%	25%	0%	0%	0%	24%	2%
Utah	22%	0%	21%	52%	0%	0%	0%	15%	0%
Washington	31%	10%	8%	37%	2%	0%	2%	22%	4%
Wyoming	28%	8%	18%	29%	0%	0%	0%	23%	0%
California	13%	7%	19%	33%	0%	0%	1%	51%	8%
Minnesota	50%	30%	20%	0%	0%	0%	0%	---	0%
F=	2.3**	5.3**	1.33	1.75	.21	.24	.37	4.1**	.36
Curriculum									
Medicine	19%	20%	11%	31%	0%	0%	0%	35%	4%
Dentistry	37%	6%	11%	31%	0%	0%	2%	25%	1%
Vet. Medicine	43%	8%	4%	20%	2%	1%	4%	38%	6%
Dental Hyg.	30%	20%	9%	27%	0%	0%	0%	21%	0%
Phys. Ther.	8%	1%	40%	43%	0%	0%	0%	30%	0%
Occ. Ther.	55%	17%	9%	18%	0%	0%	0%	23%	0%
Optometry	32%	7%	6%	26%	0%	0%	0%	---	3%
Podiatry	25%	0%	0%	73%	0%	0%	0%	---	0%
F=	4.1**	1.90	3.7**	1.15	.30	.31	1.31	.90	.42

**indicates significance at the 1% level
--indicates missing data

Table 23 continued

A= Personal earnings
B= Parental contrib.
C= Scholarship
D= Loans
E= Social Sec.
F= A.D.C.
G= G.I. Bill
H= WICHE
I= Other

	Source of Income								
Demo. char.	A	B	C	D	E	F	G	H	I
Marital status									
Single	27%	18%	10%	25%	1%	0%	0%	29%	2%
Married	35%	6%	7%	30%	0%	1%	3%	28%	7%
Divorced	51%	3%	4%	32%	0%	0%	0%	7%	0%
F=	2.21	6.5**	.70	.55	.40	.67	2.14	1.04	2.91

Degrees of freedom between groups = 2
Degrees of freedom within groups = 129

Demo. char.	A	B	C	D	E	F	G	H	I
# of dependents									
0	28%	16%	11%	27%	1%	0%	0%	29%	2%
1	40%	8%	7%	21%	0%	1%	2%	27%	7%
2	32%	8%	2%	37%	0%	0%	2%	23%	11%
3	16%	3%	1%	55%	0%	0%	22%	---	2%
4	17%	1%	19%	49%	0%	0%	0%	26%	0%
5	10%	0%	10%	0%	0%	0%	0%	---	0%
F=	1.87	1.35	1.32	2.06	.14	.50	6.2**	.12	1.45

Degrees of freedom between groups = 5
Degrees of freedom within groups = 126

Demo. char.	A	B	C	D	E	F	G	H	I
Father's Occup.									
Professional	28%	23%	5%	25%	0%	0%	0%	37%	2%
Farmer	38%	8%	7%	25%	0%	0%	2%	24%	3%
Managerial	22%	16%	12%	30%	0%	0%	0%	31%	4%
Sales	45%	16%	2%	28%	0%	0%	0%	23%	0%
Craftsman	44%	1%	7%	36%	0%	0%	3%	40%	1%
Service	19%	7%	23%	24%	0%	0%	11%	24%	0%
Farm labor	34%	7%	9%	20%	0%	0%	3%	22%	14%
Retired/emp	10%	0%	10%	80%	0%	0%	0%	27%	0%
F=	1.52	1.39	1.30	.67	.00	.00	1.55	.84	2.01

Degrees of freedom between groups = 8
Degrees of freedom within groups = 115

**significant f at the 1% level
* significant f at the 5% level
--data not available

Table 23 shows that the WICHE Student Assistance Program provides 20%-40% of the educational cost for the WICHE-aided students in all categories. Medical students receive the most aid (percentage-wise) at 35% of expenses followed by physical therapy students at 30%. The percent of cost assimilated by the Student Exchange Program depend on area as well as curriculum. The average California student, for example, had 51% of his costs assumed by WICHE, while the average student in Utah had only 15% of his expenses assimilated. In all cases, however, WICHE aid formed a significant portion of the students source of income.

All students depended heavily on personal earnings to finance their education. This reliance was constant throughout all paternal occupational groups. For example, the children of fathers in a professional or technical vocation financed an average of 28% of their education through personal earnings. Thus, in the category in which the most parental financial aid was available, the student was still forced to use a significant portion of his personal earnings. Parental aid varied considerably with occupation. (Craftsman, on the average, were only able to contribute 1% of the student's graduate education expense.) Single students relied more on parental contributinn than did married students.

The table also shows that government programs--with the exception of WICHE--have not had a meaningful impact on the graduate education of students in health care. The total grant support of government programs (excepting WICHE) supplied less than 4% of the student's educational costs.

Parental Income

As was previously noted, the average parental income of WICHE-supported students was $14,050.37. There was relatively little variation in the incomes of various occupations. Table 24 provides the income breakdown by occupation.

Table 24

Income by Father's Occupation

Professional/technical	$19,387.50
Farmer	$13,193.75
Managerial	$17,013.33
Sales	$10,900.00
Craftsman	$13,500.00
Service	$11,048.89
Farm Labor	$10,000.00
Average	$14,050.37

83.7% of the students' parents owned their own home.

Student Emancipation/Dependency Status

Most students--66.7%--considered themselves independent from their parents. According to the statistics asked for in the survey, 83% of the students correctly categorized themselves based on the Department of Health, Education, and Welfare guidelines. A crosstabulation of dependency status with the other demographic variables indicated that a significant relationship between dependency status and marital status and between dependency status and number of dependents. No other statistically significant relationships existed between dependency status and any other demographic variable (curriculum, state, etc.).

Post-Graduate Costs

As Table 23 indicated, the most significant portion of graduate school costs are borne by the student--over 57% when personal earnings and loans are grouped. This generally leaves WICHE-aided students with a sizable personal debt at the conclusion of the graduate program. The average WICHE-aided student estimated his/her personal debt upon program completion at $8,675. Table 25 shows the breakdown of personal debt by the demographic characteristics.

Table 25

Personal Debt by Demographics

Demo. Char.	Debt--pst prg
Sex	
Male	$ 8588.14
Female	$ 9454.04
Curriculum	
Medicine	$ 8987.50
Dentistry	$11991.66
Vet. Medicine	$ 9100.00
Dental Hygiene	$ 2835.86
Physical Therapy	$ 5750.00
Occupational Therapy	$ 2500.00
Optometry	$ 8034.37
Podiatry	$15000.00
Marital Status	
Married	$ 9900.00
Single	$ 7640.01
Divorced	$10500.00

Table 25 continued

Demo. Char.	Debt
# of dependents	
0	$ 7421.75
1	$10087.87
2	$10911.11
3	$ 9500.00
4	$13733.33
5	$10000.00
Father's occupation	
Professional and Technical	$ 6814.58
Farmer	$10587.54
Managerial	$ 9609.37
Sales	$ 7833.33
Craftsman	$11214,28
Service	$ 6257.14
Farm labor	$ 7366.66
Retired or unemployed	$12000.01
Average	$ 8675.00

Besides a personal debt, the graduate will usually face extreme set-up costs if he plans to go into private practice. The average estimated set-up costs for all fields runs approximately $67,489. Table 26 provides a breakdown of set-up cost by curriculum.

Table 26

Set-up cost by curriculum

Medicine	$36,363.63
Dentistry	$47,214.28
Vet. Medicine	$106,666.62
Dental Hygiene	$33,566.66
Physical Therapy	$22,500.00
Occupational Therapy	
Optometry	$44,333.32
Podiatry	$25,000.00

It can be safely concluded from tables 25 and 26 that the graduate in health care education have a considerable financial burden after completing their education.

Graduate Location

The survey indicated that most students aided by the WICHE Student Exchange Program would prefer to practice in Montana. In fact, 84% of those surveyed said they planed to practice in Montana. Another 7.2% preferred anywhere in the Northwest--including Montana. 6.8% were undecided, and only 2.3% of those sampled indicated that they did not plan to practice in Montana. Most of the respondents said they would prefer private practice (43.2%) as opposed to clinical practice (30.3%). About 25% were undecided as to a type of practice.

EXHIBIT A -- SUMMARY OF RESULTS OF WICHE STUDENT NEEDS SURVEY

SUMMARY SHEET--WICHE NEED ANALYSIS SURVEY

	Mean
Total Cost of Education (per year)	$6,382.19
Direct Cost of Education	2,165.89
Registration fees	1,528.57
Books	536.36
Other	100.96
Indirect Cost of Education	4,216.30
Housing	1,304.65
Food	832.50
Medical and Dental	175.85
Transportation	513.90
Clothing	228.30
Child support	6.44
Recreation	271.54
Other	883.12
How Education is paid for	
Personal earnings	30.96%
Parental contribution	12.74%
Scholarship (excluding WICHE)	9.09%
Loans	27.51%
Government Programs	
Social Security	0.50%
A.D.C.	0.30%
G.I. Bill	1.62%
Vocational Rehabilitation	0.00%
W.I.C.H.E.	28.33%
Other	0.63%
Other	4.30%
Personal Debt after Graduation	$8,675.00
Estimated set-up costs	$67,489.56
Parental Income	$14,050.37

WICHE SURVEY SUMMARY SHEET CONTINUED

Characteristics of WICHE Students

Sex

Male	81.8%
Female	18.2%

State Attending

Arizona	2.3%
Colorado	25.8%
Idaho	1.5%
Nevada	.8%
New Mexico	.8%
Oregon	22.7%
Utah	3.0%
Washington	29.5%
Wyoming	2.3%
California	9.8%
Minnesota	.8%

Curriculum

Medicine	34.1%
Denistry	10.6%
Vet. Medicine	31.1%
Dental Hygiene	6.1%
Physical Ther.	3.0%
Occ. Therapy	1.5%
Optometry	1.5%
Podiatry	.8%

Marital Status

Single	55.3%
Married	42.4%
Divorced	2.3%

Number of Dependents

0	57.6%
1	28.0%
2	7.6%
3	3.0%
4	3.0%
5	0.8%

Age

19	.8%
20	1.5%
21	11.4%
22	18.2%
23	15.9%
24	17.4%
25	14.4%
26	8.3%
27	3.8%
28	3.0%
29	1.5%
30	1.5%
34	.8%
35	.8%
37	.8%

Dependency status

Emancipated	66.7%
Dependent	33.3%

Father's Occupation

Professional and Technical	24.2%
Farmers	20.2%
Managerial	13.7%
Sales	6.5%
Craftsman	5.6%
Service	7.3%
Farm labor	.8%
Retired or unemployment	15.2%

Mother's occupation

Professional and Technical	19.5%
Farmer	.8%
Managerial	3.8%
Clerical	9.1%
Sales	1.6%
Craftsman	.8%
Service	3.0%
Housewife	58.6%
Retired or unemployed	2.3%

Do parents own home?

Yes	83.7%
No	16.3%

EXHIBIT B -- WICHE STUDENT NEEDS SURVEY FORMAT

MONTANA WICHE NEEDS SURVEY

Name ____

Address ______________________________________

University attending ____________________________

Curriculum ____________________________________

Marital status _________________________________

Age ____

No. of dependents ______________________________

1. Estimated cost of living.

   A. Educational expense.

      1. Registration and tuition fees $ __________
      2. Books, supplies, clinical materials $ __________
      3. Other educational expense $ __________

   B. Personal and family maintenance

      1. Housing (include utilities) $ __________
      2. Food $ __________
      3. Medical and dental $ __________
      4. Transportation (include license, insurance and gas) $ __________
      5. Clothing, laundry, cleaning $ __________
      6. Child support (if divorced or separated) $ __________
      7. Recreation $ __________
      8. Other: $ __________
      9. Other: $ __________

2. For the purposes of fees and financial aid, do you consider yourself dependent on your parents or emancipated?

____

3. What was the last year your parents claimed you as a deduction on their income tax?

____

4. When was the last year your parents contributed more than $600 to your education?

____

5. What was the last year you lived more than two weeks at your parents' residence?

____

6. How are you financing your education?

Give breakdown in percentages.

A. Personal earnings. ______%

B. Parental contribution. ______%

C. Scholarships, grants, etc. ______%

D. Loans. ______%

E. Government programs:
    1. Social Security ______%
    2. A.D.C. ______%
    3. G.I. Bill ______%
    4. Vocational Rehabilitation ______%
    5. Other: ________________ ______%
    6. Other: ________________ ______%

F. Other: ________________ ______%

G. Other: ________________ ______%

7. What is your father's occupation? ____________________

Mother's? ____________________

8. Do your parents own their own home? ____________________

9. Do you have any brothers and sisters attending college?

How many? _______________ How many others are in the family? _________

10. About how much do your parents earn in income each year? $_________

11. How much of a personal outstanding debt do you anticipate having at the conclusion of your education? $ __________

12. Where do you plan to practice after you graduate?

____

What type of practice: Clinic _____
Private _____
Other _____ (specify)

13. What are the estimated cost of establishing your own practice (equipment, office,etc.)? $____________

Thank you.

COMMISSIONER OF HIGHER EDUCATION
1231 11th Avenue
Helena, Montana 59601

EXHIBIT C -- ANNUAL TUITION OF WICHE INSTITUTIONS 1974-1975

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Medical Schools, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
University of Arizona	$1,850.00	2S, 3-yr. curr.	$960.00
Univ. of Calif., Davis	$2,374.00	3 Q, Fr. Yr. 4 Q, Soph., Jr. & Sr. (each yr. includes Summer Q)	$874.00
Univ. of Calif., Irvine	2,436.00	4 Q Fr. & Sr.	892.00
	1,728.00	3 Q Soph. & Jr.	684.00
Univ. of Calif., Los Angeles	2,908.00	4 Q, 3rd yr.	908.00
	2,181.00	3 Q, 1st, 2nd, 4th yrs.	681.00
Univ. of Calif., San Diego	1,500.00	3 Q	678.00
	200.00	Summer	200.00
Univ. of Calif., San Francisco	2,218.50	3 Q	739.50
Univ. of Colorado	4,682.00	3 Q	1,170.00
University of Hawaii	894.00	2 S	223.50
University of New Mexico	1,500.00	2 S	630.00
University of Nevada	2,959.00	2 S	1,259.00
University of Oregon	2,184.00	3 Q	993.00
University of Utah	1,540.00	3 Q	850.00
University of Washington	1,839.00	3 Q	840.00

SUPPORT FEE APPROVED FOR 1974-75 is $5,000

Medical Schools, cont.

	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
Private Schools:			
Loma Linda University	$4,000.00	4 Q	None
Univ. of So. California	3,250.00	3 Trimesters	Credited to student's tuition account
Stanford University	3,570.00 4,760.00	3 Q 4 Q	Support fee credited to student's tuition account

SUPPORT FEE APPROVED FOR 1974-75 IS $5,000

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Dental Schools, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
Univ. of Calif., Los Angeles	$ 207.00	1 Q, Soph. summer	$ 207.00
	2,181.00	3 Q	681.00
Univ. of Calif., San Francisco	2,201.25	3 Q	701.25
	110.00	Summer required Incoming Jr. & Sr. Yrs	110.00
Univ. of Colorado	9,416.00 (est.)	4 Quarters	9,416.00 (est.)
University of Oregon	2,254.50	3 Q	1,063.50
University of Washington	1,839.00	3 Q	840.00

rivate Schools	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
Loma Linda University	4,000.00	4 Q, 3 yr. program	1,400.00
University of So. California	3,600.00	3 trimesters	1,340.00
University of the Pacific	4,254.00	4 quarters	1,672.00

SUPPORT FEE APPROVED FOR 1974-75 IS $4,000.

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Veterinary Schools, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
Univ. of Calif., Davis	$2,170.50	3 Q	$670.50
Colorado State University	2,037.00	3 Q	509.00
Washington State University	1,839.00	2 S	832.00

SUPPORT FEE APPROVED FOR 1974-75 IS $4,000

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Dental Hygiene Schools, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student	Degree or certificate granted
Public schools:				
Univ. of Calif., S.F.	$2,146.50	3 Q	$646.50	B.S.
Rangely College	700.00	2 S	290.00	
	150.00	2 S Clin fees	150.00	
Idaho State University				B.S.
Univ. of New Mexico	1,284.00	2 S	456.00	A.S. B.S.
Lane Community College	1,407.00	3 Q	570.00	A.S.
Oregon Technical Inst.	1,800.00 (est.)	3 Q	570.00 (est.)	A.S.
University of Oregon	1,552.50	3 Q	631.50	Cert. or B.S.
Univ. of Washington	1,581.00	3 Q	564.00	B.S.
Sheridan College	1,050.00	2 S	1,050.00	A.S.
	54.00	1 Summer	54.00	

	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student	Degree or certificate granted
Private schools:				
Loma Linda University	2,055.00	3 Q	1,515.00	B.S.
Univ. of So. California	3,000.00	3 Trim.	2,500.00	B.S.

SUPPORT FEE APPROVED FOR 1974-75 IS $1,000

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Physical Therapy Schools Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public schools:			
Calif. State College at Long Beach	$1,317.00	2 S	$190.00
Calif. State Univ., Northridge	1,154.00	2 S + Summer Session	590.00
Univ. of Calif., San Francisco			
University of Colorado	3,853.00	4 Q	963.00
University of Utah	1,230.00	3 Q Jr. Yr.	480.00
	1,230.00	Clinical fees, Jr. 3 Q Sr. Yr.	480.00
Univ. of Washington	1,551.00 134.00	3 Q Clinical fee	564.00 134.00

	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
Private Schools:			
Children's Hospital of L.A.	1,500.00	14 mos.	None
Loma Linda University	2,055.00	3 Q	1,200.00
	385.00	Summer, Jr.	385.00
Univ. of So. California	3,[illegible]	2 S	
Stanford University	3,513.00 1st. 3,375.00 [illegible]	3 Q Yr. 1 3 Q Yr. 2	

SUPPORT FEE APPROVED FOR 1974-75 IS $1200 PLUS CLINICAL FEES.

SUPPORT FEE APPROVED FOR 1975-76 IS $2500 PLUS CLINICAL FEES.

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Occupational Therapy Schools, Fall, 1974

(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
San Jose State University	$ 1,492.00	2 semesters	$ 192.00
	Clinical fees figured according to No. of units taken		
Colorado State University	1,739.00	3 quarters	435.00
	1,739.00*	Clinical fees*	435.00*
University of Washington	1,581.00	3 Q, B.S. degree	564.00
	527.00	Clinical fees	188.00

* Beginning fall quarter 1974, O.T. graduates will have to pay full tuition and fees for each of three required clinical affiliations of three months each, total nine months.

	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
Private Schools:			
Loma Linda University	$2,055.00	3 quarters	$1,263.00
	425.00	Jr. Summer	425.00
University of So. Calif.			
University of Puget Sound	2,324.00	3 semesters	1,124.00
	150.00	Clinical fees	150.00

SUPPORT FEE APPROVED FOR 1974-75 IS $1200, PLUS CLINICAL FEES.

SUPPORT FEE APPROVED FOR 1975-76 IS $2500, PLUS CLINICAL FEES.

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Optometry Schools, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
University of California, Berkeley	$2,137.00	3 Q	$ 637.00

	Standard Tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
Private Schools:			
So. Calif. College of Optometry	$2,750.00	3 Q	-
Pacific Univ. Coll. of Optometry	$2,400.00	2 S	1,200.00

SUPPORT FEE APPROVED FOR 1974-75 IS $1,200.00.

SUPPORT FEE APPROVED FOR 1975-76 IS $2,500.00.

Annual Tuition, Required Fees, and Charges to WICHE Exchange Students
in [illegible] Schools, Fall, 1974
(as of June 13, 1974)

Private School: California College of Podiatric Medicine

Class	Standard tuition	Terms included in tuition figures		Reduced tuition charged WICHE student
1974	$ 4,200.00	4 Q	per Bailey 6/13/74	

SUPPORT FEE APPROVED FOR 1974-75 IS $2500.

SUPPORT FEE APPROVED FOR 1975-76 IS $4000 per calendar year.

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Forestry Schools, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
Northern Arizona University	$665.00	2 S	$336.00
	336.00	Regist. fee	
University of Calif., Berkeley	2,137.50	3 Q	637.50
Colo. State University	1,903.98 (est.)	3 Q	612.00
University of Idaho	1,380.00	2 S	380.00
	175.00	Summer camp	
University of Montana	1,318.50	3-Q	471.00
	45.00	Forestry Fee	45.00
Oregon State University	1,821.00	3 Q	561.00
Utah State University	1,320.00	4 Q	584.00
University of Washington	1,641.00	3 Q graduate	624.00
	1,581.00	3 Q undergrad.	564.00

SUPPORT FEE APPROVED FOR 1974-75 IS $1500

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Graduate Library Studies, Fall, 1974
(as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
San Jose State University	$1,192.00	2 S	$192.00
Univ. of Calif., Berkeley	2,197.50	3 Q	697.50
	264.75	Summer	264.75
Univ. of Calif., Los Angeles	2,181.00	3 Q	681.00
University of Hawaii	1,483.00	2 S	372.00
	180.00	1 Summer	120.00
University of Oregon			
University of Washington	1,141.00	3 Q	624.00
		1 Summer	188.00

	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
Private Schools:			
University of Denver	$2,350.00	3 Q	350.00
	950.00	Summer Q	116.33
Univ. of So. California	2,910.00	2 S	
	582.00	1 Summer (6 wks)	

SUPPORT FEE APPROVED FOR 1974-75 IS $2500

Annual Tuition, Required Fees, and Charge to WICHE Exchange Students in Western Law Schools, Fall, 1974 (as of June 5, 1974)

	Nonresident tuition	Terms included in tuition figures	Resident tuition charged WICHE student
Public Schools:			
Arizona State University	$1,314.00	2 S	$434.00
University of Arizona	890.00	2 S	411.00
Univ. of California, Davis	2,197.50	3 Q	670.50
Univ. of California, Hastings	2,194.00	2 S	694.00
University of Colorado	2,095.00	2 S	663.00*
University of Idaho	1,580.00	2 S	580.00
University of Montana	1,660.00	(Tuition and Fees) 2 S	688.00
University of New Mexico	1,308.00 (est.)	2 S	480.00 (est.)
University of Oregon	1,110.00 (est.)	2 S	1,110.00 (est.)
University of Washington	1,641.00	3 Q	624.00
University of Wyoming	1,376.50	2 S	410.50

*Includes health and activity fees ($81 per semester) and Blue Cross insurance ($12.50 per semester).

	Standard tuition	Terms included in tuition figures	Reduced tuition charged WICHE student
U.S. International Univ. Calif. Western Law School			
University of the Pacific	2,391.00	3 Q	None
Golden Gate University	1,920.00 $864-1920 60.00	2 S 1st yr. 2 S 2nd, 3rd, 4th yrs. Per unit	
University of Santa Clara	2,250.00	2 S	None
Univ. of So. California	3,050.00	2 S	550.00

aw, continued

	Standard tuition	Terms included in tuition figures	Reduced fee charged WICHE student
Private Schools cont.			
Southwestern University	$2,100.00	2 S	None
University of Denver	2,850.00	3 Q	Support fee credited to student's account
Lewis & Clark	2,150.00	2	None
Willamette University	2,274.00 (includes fees)	2 S	
Gonzaga University	1,950.00 110.00 fees	2 S	
University of Puget Sound		2 S	
University of San Francisco	2,375.00	2 S	803.00

SUPPORT FEE APPROVED FOR 1974-75 IS $2500

CHAPTER III

MANPOWER NEEDS AND OPTIONS FOR MONTANA

The United States faces both an acute shortage and maldistribution of medical personnel. Indeed, the President's Advisory Commission on Health Manpower estimated that the United States is short approximately 50,000 primary care physicians.(1) Supply of manpower in areas of medical specialties also falls short of need. The American Association of Colleges of Podiatric Medicine, for example, has conservatively estimated that there will be an approximate 14,000 deficit in podiatrists by 1980.(2) The shortage of all types of health workers--including physicians, osteopaths, dentists, nurses, optometrists, podiatrists, veterinarians, pharmacists, and allied health personnel--currently amounts to over 500,000 workers according to the U.S. Public Health Service. This overall shortage is expected to increase 50% to a deficit of 724,000 personnel by 1980.(3)

The national crisis in health care personnel is reflected in Montana. There are only thirteen states with a lower physician-patient population than Montana.(4) Many of the supporting specialties are in short supply in Montana. There are only 53 speech therapists, 33 physical therapists, and 17 occupational therapists in the state--professions that are vital to stroke patient rehabilitation. More seriously, Montana's health personnel are maldistributed. Rural Montana suffers the most. There are five counties that do not have a practicing physician in them. Many counties have only a few registered nurses residing in the geographic vicinity. The Montana Commission on Postsecondary Education noted in its Technical Report on Health Care Education that:

> "Maldistribution of health care personnel......is generally the most serious deficiency in Montana's health care delivery system, especially as it relates to rural areas."

The question obviously becomes: How can Montana best provide for an adequate supply of health manpower in its approach to education? After examination of many alternatives, the most efficacious solution seems to be continuation and expansion of the WICHE Student Exchange Program, continuation of the WAMI program, and renewed attempts to add continuing education, student exchange programs, and increased scholarship and loan funding. The most important alternatives are discussed below.

Construction of Medical or Dental Schools

The most immediate alternative for Montana would be the construction of a new medical or dental school. The most pressing obstacle to the construction of a facility is economic: construction of a medical school has been estimated at over $100 million. Operating costs would probably run well over $5 million per year. This enormous capital investment would be extremely hard to justify. No assurance of adequate manpower supply could be made with the establishment of a school, and certainly no guarantees of adequate distribution of personnel could be made. Indeed, some of the greatest shortages in the country exist where there is a saturation of medical training facilities. Second, supply is not as great a problem as maldistribution, and the lack of specialists in certain areas of the state. Creation of a new medical school would not address these needs. Third, the problem of Montana student accessibility to medical school has been aided enormously by the continued support of the WICHE Student Exchange Program. In short, construction of a new medical school would pose an enormous financial burden on the state

without sufficient justification. At some future time, Montana's needs and resources may have altered to the point that a new facility can be justified, but no current justification exists.

Buying Admissions Nationwide

Some suggestion has been made that Montana should "purchase" admissions for Montana students in a graduate program. This would probably be accomplished administratively through a contract with the appropriate graduate school for a number of guaranteed admissions for Montana, and an additional support fee to the school for the student. There are a number of problems with the proposal. First, the state of Montana cannot impose choice on the student in making his admission for graduate education. As the statistics from the survey indicate, students aided by the WICHE program go to schools throughout the entire western United States. Purchasing admission spots at a specific school--or group of schools--would probably not appreciably affect student opportunities as a whole. Second, indications are that virtually all graduate schools (and programs) are uninterested in constricting their admission flexibility by signing the agreement. Most graduate programs in health-related fields are currently saturated. Third, the program offers no advantages over the WICHE S.E.P. and cannot guarantee either manpower supply or equitable distribution in Montana. Administrative problems and expense would be considerable.

Student Loan Program

The initiation of a new student loan program for students in health-related fields would be a valuable addition to the state's health care education program. The survey conducted of Montana WICHE-aided students indicated that a substantial financial need existed above and beyond present aid, and

that most WICHE-aided students planned to return to Montana to engage in practice. A scholarship or loan program would undoubtedly increase the student's ties to the state and also provide additional educational opportunities to Montana residents.

Indenturedness

Some states have opted for a contractual program of WICHE assistance, whereby the student receives state assistance contingent on his promise to return to the state after his education to practice. The overwhelming preponderance of the evidence suggests that this approach is extremely unsuccessful in creating further inducements to the students to return, and is in fact, counterproductive by encouraging students to seek resident status in states where medical or other graduate schools are located (thus eliminating their residency tie to Montana). Two states have the indenture program--Idaho and Arizona. The experience with the indenture law has been overwhelmingly negative. Dr. Fred Graeber, Idaho's Associate Director for Medical Education, stated that ".....the law had little effect. Students with high ethical standards may be influenced to return.....but there is no way of measuring this....." (See Exhibit A, attached)

Dr. Herbert Rhodes, Executive Secretary of the Arizona Commission of WICHE provided even more negative commentary concerning Arizona's indenturedness provision:

> "If the Arizona indenture provision has been effective in encouraging students to practice in the state, we think that the effect has been a very small one. The Commissioners and I have always been opposed to the indenture provision and we have made countless efforts over the years to have this provision removed by amendment of the enabling statute. During one of these efforts, one of the commissioners and I telephoned or wrote to every former WICHE student who was currently practicing in the Phoenix or Tucson areas. We asked each one of these men directly whether he was practicing within Arizona because of the statutory requirement. We got the

> answer in almost every case that the indenture clause was not a factor and that the practitioner in question was practicing in Arizona because it had been his home and he wanted to return there. In only two cases was there any question of persuasion.....I repeat, we are personally persuaded that the indenture provision of the Arizona law is not very effective in encouraging WICHE students to return here for practice."

Rhodes also discussed a greater harm resulting from the Arizona indenture provision--that of having the WICHE student attempt to gain out-of-state residency to avoid the provision. Gaining residency in another state usually destroys all incentive to return to the home state. Indeed, Dr. Rhodes comments:

> ".....it is our belief that our indenture provision does indeed encourage students to attempt to gain residency in receiving states." (See Exhibit A, attached)

Indenturing the services of only those students participating in the health related fields of WICHE, rural dentistry, and WAMI, raises the immediate question of equitable treatment. Montana does not indenture the services of students or require the payback of public monies expended in other areas of public education. Yet there are programs within the University System that are as costly as many of the programs covered under the WICHE Student Exchange Program. If only a portion of the programs were selected for indenturing, then the question might end up being litigated in a court of law. Thus, adapting an indenture provision in the WICHE program would seem to be a negative step of little value and possibly potential harm.

WICHE Student Exchange Program Expansion

The Student Exchange Program has been reasonably successful in returning health personnel to Montana. Indications show that approximately 84% of the students will return to Montana if employment opportunities are

available. Further, WICHE's S.E.P. has provided Montana with preferential admissions at western graduate schools. (The WICHE-aided student has a better chance of gaining admission than does the unaided applicant.) Therefore, the program has gained educational access for Montana residents who are likely to return to the state. Given the increasing cost of out-of-state tuition, WICHE is likely to assume a more important role in graduate education financing by assuming more of the expense. Expanding the program can only increase Montana's health manpower base.

WAMI and WAMI-Type Arrangements

WAMI is still an experiment, but thus far, it has been a successful one. The program has provided residents with a substantially greater access to medical school as well as providing Montana with a partial medical school of its own. An in-migration of medical manpower is encouraged by having the students participating in the program spending part of their education at Montana State University. The program has also permitted the University of Washington to expand its admissions without expanding its physical plant.

WAMI and WAMI-type arrangements in other health fields should be encouraged as methods of creating greater educational opportunity for Montana residents and of supplying Montana's health manpower needs. These type of arrangements allow the state to benefit from the clinical training manpower, but do not cost the state exorbitant amounts of funding (as would the establishment of a medical or dental school).

Conclusion

In short, the most successful method of providing an adequate supply of manpower to Montana at the least cost to the state appears to be a combination of the following:

1. A continuation and expansion of the WICHE Student Exchange program.
2. The development of a student loan program for graduate students in the health-related fields to supplement the WICHE program.
3. The continuation of WAMI, and the development of WAMI-type arrangements with other states in other health fields.

Footnotes

(1) Senate Committee on Labor and Public Welfare; Health Manpower Legislation: Hearings on S. 934 and S. 1747; Washington, D.C.; 1971; page 1.

(2) Ibid., page 770.

(3) Ibid., page 886.

(4) WICHE, Montana Health Profile; Boulder, Colorado; 1969; page 241.

(5) Montana Commission on Postsecondary Education; Technical Report on Health Care Education; Helena, Montana; 1974; page 3.

EXHIBIT A -- CORRESPONDENCE CONCERNING THE INDENTURE PROVISIONS OF IDAHO AND ARIZONA

THE ARIZONA COMMISSION
of the
WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION

HERBERT D. RHODES, EXECUTIVE SECRETARY
UNIVERSITY OF ARIZONA
TUCSON

COMMISSIONERS
Dermont W. Melick, M.D., Chairman
Tucson
Richard A. Harvill, Secretary
Tucson
Sam Flake
Mesa

29 April 1974

Mr. Sid R. Thomas
Administrative Intern
The Montana University System
1231 Eleventh Avenue
Helena, Montana 59601

Dear Mr. Thomas:

In commenting on the questions raised in your letter of 23 April 1974, I shall draw on my own personal impressions and experience with the Student Exchange Program of this state since it began in 1954. I emphasize that these are subjective views because we do not have any hard data to arrive at appropriate answers to your first two questions. I believe, however, that the views I shall express below are shared by the two Arizona Commissioners who have been associated with this program for a great many years. Our third Commissioner was appointed just one month ago and I am not at all sure that he is in a position to make any valid observations at this time.

1. We don't really know the answer to this question but our belief is that our indenture provision does indeed encourage students to attempt to gain residency in receiving states. It seems to me that this is the logical thing to do and I am sure that I would do it if I were a WICHE student. Furthermore, we do have a sprinkling of WICHE students who do establish themselves as residents of the receiving state (particularly California where this is a relatively simple matter) and therefore drop out of the WICHE program. It seems logical to assume that they do this in order to avoid further obligation to the state.

2. If the Arizona indenture provision has been effective in encouraging students to practice in the state, we think that the effect has been a very small one. The Commissioners and I have always been opposed to the indenture provision and we have made countless efforts over the years to have this

provision removed by amendment of the enabling statute. During one of these efforts about eight or ten years ago, one of the Commissioners and I telephoned or wrote to virtually every former WICHE student who was currently practicing in the Phoenix or Tucson areas. This, of course, is the vast majority of them. We asked each one of these men directly whether he was practicing within Arizona because of the statutory requirement. We got the answer in almost every case that the indenture clause was not a factor and that the practitioner in question was practicing in Arizona because it had been his home and he wanted to return here. In only two cases was there any question of persuasion. These two persons told us that they really had no particular preference with respect to practice location so they came back to Arizona because they could save some money that way. A fair number of others who had told us they were practicing here because they preferred it here went on to say that they would not have returned if they preferred to practice elsewhere but would simply have remained out of state and paid the cash penalty required. I repeat, we are personally persuaded that the indenture provision of the Arizona law is not very effective in encouraging WICHE students to return here for practice. (Furthermore, we are utterly opposed to this provision on a philosophical basis. We do not believe it is educationally sound. We would regret to see such provision established in other states.) We also believe, however, that the impact of our indenture provision on the WICHE program utilization has been very slight. Here again, it is quite difficult to evaluate the effect accurately and we have made no survey. We have had a few cases, however, of students who have stated that they preferred to avoid the obligation which WICHE participation involves and therefore preferred to make other arrangements for their financial support.

3. The State of Arizona provides no other financial support that is available to WICHE students. Both the Arizona Medical Association and the Arizona Dental Association have had limited loan funds available in the past for the assistance of both WICHE and non-WICHE professional students.

4. We do not have any procedures for assessing student financial need. Our statute is completely silent on this point and merely states that the Commissioners shall (mandatory) certify for participation up to three times as many qualified applicants as can be accommodated in a given year. The statute does make it clear that the selection of applicants for participation

will clearly rest with the professional schools unless the legislature fails to provide adequate funding for all qualified applicants who are accepted. We have had very little difficulty in this regard. Since the statute pointedly ignores financial need the Commissioners have seen no reason to consider it.

Sincerely yours,

Herbert D. Rhodes

HDR p

STATE OF IDAHO
STATE BOARD of EDUCATION

Office of the Executive Director
for Higher Education

413 Idaho Street
Boise, Idaho 83702

April 26, 1974

Sid R. Thomas
Administrative Intern
The Montana University System
Twelve Thirty-One Eleventh Avenue
Helena, Montana 59601

Dear Mr. Thomas:

This is in response to your letter of April 23, 1974

In answer to your specific questions:

1) Although Idaho has an indenture law it has never been enforced. The law requires return within three years of graduation and practice within the State for two years or repayment of all the support fees. Many students have not returned -- no one has ever been asked to pay any money back and no one has ever paid any back, as far as I can determine. There seems to be a belief that this law is unconstitutional and cannot be enforced, but no formal legal opinion to this effect exists as far as I know. Our application form requires an applicant for certification to the program to declare "intent" to return to the State. If the applicant signifies "no intent" -- we would not certify him, but in actual practice students do not do this.

Given this history of our indenture law I do not then believe that the law encourages students to attempt to gain residency in receiving states.

I think a few students may decline to seek certification to the WICHE program because of unwillingness to promise to return to the State.

2) The impact of the indenture law in encouraging students to return to Idaho to practice is a matter of opinion. My opinion is that the law has had little effect. Students with high ethical standards may be influenced to return even though the law is not enforced, but there is no way of measuring this. Because of the work involved we have not attempted any recent statistical studies, but earlier studies indicate that perhaps half of the WICHE students do return to Idaho.

3) Idaho has no financial aid program available to WICHE students.

4) There are no financial need requirements for WICHE applicants. Certification to the WICHE program is based on State residency. If the student submits satisfactory evidence that he is a resident of Idaho, certification quite automatically follows.

Because it may be of interest to you I have enclosed an "Alternatives in Health Education" study we prepared last year for our State Board of Education and the Legislature. The pros and cons of the WICHE student exchange program appear on page 10 and again on page 36.

Sincerely,

Fred O. Graeber

Fred O. Graeber, M.D.
Associate Director for
Medical Education

FOG:dl
Enclosure

CHAPTER IV

METHODOLOGY OF FINANCIAL NEED ASSESSMENT PROCEDURES

This section presents a brief examination of two commonly used procedures used to analyze the financial need and resources of students applying for financial aid at colleges and universities. Examination of the methodologies of the College Scholarship Service and the Department of Health, Education and Welfare shows some of the complexities of the problems involved in arriving at a determination of financial need.

A. The College Scholarship Service -- History and Methodology

In the early 1950's a national need developed for a consistent and equitable approach to the allocation of financial aid for students. This demand on the part of institutions of higher learning was given considerable stimulus from burgeoning federal and state programs and the attendant requirements for uniform calculation procedures. In response to this entreaty, the College Entrance Examination Board established the College Scholarship Service (CSS) to devise methods to objectively assess student financial need. With the aid of the educational community, the methodology for determining parental and student ability to meet educational expense was formulated, and since 1954 the College Scholarship Service has been furnishing the assessment service to colleges and universities. Most federal student aid programs (college work-study, National Defense Student Loan program, Basic Educational Opportunity Grant program, etc.) now require need assessment by the CSS.

The CSS financial need analysis system is based on several assumptions:

1. Parents have an obligation to finance the education of their children to the extent that they are able.
2. Students have an obligation to share the responsibility for meeting the cost of postsecondary education.

3. The student and his family must be accepted in their present financial condition.

Financial need is defined by CSS simply as "the difference between the cost of an education at a particular institution and the amount of money a student and his family can reasonably make available.....to meet the expenses of education."

There are a few limitations to the CSS analysis system that should be delineated before the mechanics of the system are described. First, CSS calculations are based on the student's (and the family's) financial ability to meet educational cost. Thus, such factors as academic excellence, intellectual potential, and other similar factors are not taken into consideration. The degree to which these elements are given weight is left up to the individual financial aid officer and institutional criteria. Second, CSS suffers the problems of inflexibility that are endemic to national standardized tests. The CSS nationwide standards may not be applicable to an individual case, and certainly do not take into consideration varying local economic factors. Third, CSS analyzes the financial situation within a narrow time framework. Over a period of four years, family and student financial adequacy can vary enormously. CSS financial need analysis gauges financial exigency only at the moment that the statement was prepared. Finally, the CSS system's concern with educational opportunity is limited to fiscal considerations. Minority ethnic group background, specialty interest, or geographic representation are not taken into consideration in the computation.

With these shortcomings in mind, the mechanics of the CSS need analysis system can be discussed. There are two principle data analysis functions that CSS performs: analysis of parental ability to contribute to educational

expense for dependent students, and analysis of the student's ability to finance his education for emancipated students.

1. Need - Assessment for dependent students

The CSS examination of parental financial solvency begins with a questionnaire known as the Parents' Confidential Statement. The PCS is filled out and returned to one of three regional centers, and then examined by CSS. In determining the amount of money that can reasonably be contributed to a child's education, the CSS system employs a "moderate" standard of living. The figures utilized by CSS to define the middle third of the population were derived from the Spring 1967 cost estimates by the United States Bureau of Labor Statistics adjusted to the February 1973 Consumer Price Index for a two-parent, two-child family. The number of children attending a postsecondary institution is also taken into consideration in the calculation. The following tables should help to indicate the CSS definition of moderate and low income after federal income tax is deducted.

Two-Parent Family	Moderate-Income Levels	Low-Income Levels
Number of dependent children	Income after federal tax	Income after federal tax
1	$ 8,860	$ 6,010
2	10,310	7,000
3	11,650	7,910
4	12,670	8,610
5	13,390	9,360
6	14,120	9,860
7	14,840	10,370
8	15,460	10,800
9	15,970	11,170
10	16,390	11,450

CSS expects parental contribution to include the basic essentials of life plus as much of the costs of education that the family can afford. At the lower-income level, CSS only expects minimal contribution.

The first stage of computation determines the parent's net income--which is simply defined as business expense subtracted from taxable income.

Allowable business expense: (By CSS definition)

Salesmen, doctors, clergy, or if profession indicates necessity:
Cost of goods
Cost of office help
Cost of operating business car
Educational expense if job-related and income is shown
Entertainment
Equipment and supplies
Legal fees
Office or home office
Professional dues and literature
Promotional
Travel (not commuting)

Truck drivers, railroad and construction workers:
Living away from home expenses

Expenses on income-producing property:
Depreciation
Insurance
Interest
Taxes
Upkeep
Utilities

Miscellaneous:
Investment expense
Tools
Uniforms and work clothes
Union dues

Non-Allowable business expense: (By CSS definition)

Commuting expenses
Contributions
Debts from personal charge accounts
Expenses on nonincome-producing property
General home repairs or improvements
Home Mortgage payments
Income tax preparation
Interest expense
Living expenses away from home for family
Lunches
Medical insurance premiums and expenses
Self-retirement payments and self-employment taxes
Social Security deductions
State and local taxes
Tithes
Unexplained expenses

After net income is calculated, an "effective" family income is determined to estimate a realistic contribution expectation. There are several adjustments that CSS allows in the computation of effective income. First, federal and state income taxes are deducted from gross income. Other taxes, such as property, inheritance, etc., are not subtracted. Second, CSS grants a "working spouse" deduction. Social analysis indicates that it costs more for a family to have two people earning a set income

than for one person to earn the same income. A deduction of 50% of the first $2000 of earnings and 25% of earnings over $2,000 is allowed up to a maximum $1,500 deduction. The salary of the lesser-earning spouse is used for the calculation. Third, allowances for medical and dental expenditures in excess of 5% of the norm for a family size and income level is permitted. Fourth, CSS allows deductions for dependents other than children. $600 is allowed for each dependent claimed as an exemption for federal income tax. Fifth, emergency expenses (such as flood damage, etc.) can be claimed as deductions from effective income. Finally, personal indebtedness in excess of assets can be deducted from income for CSS purposes.

Allowable emergency expenses:

Alimony payments
Cemetery lots (at time of need)
Child support
Funeral expenses
Legal fees
Moving expenses (job-related and only over reimbursement)
Nursing home care
Sewer, street, and water assessment (installation only)
Termite control including damage repair
Uninsured natural disasters not covered by insurance (flood, fire, storm damage, etc.)

Allowable Indebtedness:

Encumbrances (second mortgage, lien, personal loan for down payment, etc.)
Funeral expenses
Indebtedness (loan or margin account) to purchase investment
Legal fees
Living expenses if business failure, prolonged illness, unemployment, etc. have depleted assets and forced indebtedness
Past business debts--business dissolved and parent personally responsible for repayment
Past educational indebtedness for parents' education

Nonallowable emergency expenses or indebtedness:

Appliance purchases
Balance due on personal charge accounts for food, clothing, and the like
Car payments or repairs
Charge accounts on installment purchases
Child care

Nonallowable emergency expenses or indebtedness: (cont.)

Commuting-to-work expenses
Contributions to charities, churches, or other nonprofit organizations
Cost of lunches bought away from home
Debts incurred in a presently functioning business
Furniture purchases
Housekeeping expenses for working mother
Living away from home expenses
Living expenses of family members, including food, clothing, and the like
Minor repairs to personal property
Mortgage payments on family home
Personal taxes (real estate property, income, or expenses)
Premiums for insurance other than medical
Real estate taxes on nonincome-producing property
Retirement payments, whether made to social security program, state or company plan, or personal plan
Routine home repairs, such as maintaining plumbing and electrical and heating systems, and painting
Schooling expenses for children
Tithes
Travel expenses (judgment exercised)
Unexplained items, when explanation is requested on PCS
Unpaid taxes and accident costs
Vacation expenses
Wedding, confirmation and Bar Mitzvah

The effective income that remains after the preceding items are deducted is considered by CSS to be income for discretionary purchases and investments. CSS believes that education contribution must have priority among discretionary investment, and thus treats the "discretionary" income in this light.

Effective income:

Parents' taxable income
- Business expenses
+ Parents' nontaxable income
= Total income (net income)

(Federal income tax paid
(State income tax paid
(Working spouse allowance
-(Medical and dental expenses
(Emergency expenses
(Indebtedness
(Other dependents

= Effective income

After effective income is determined, the next step of the CSS system is to figure the supplementary income for the family. Calculation of net

worth is the initial step in this formulation. Net worth is determined by summing residence equity (the difference between the market value of a residence and the unpaid mortgage), other real estate (value calculated in the same manner as equity), a percentage of the worth of a business or farm (total value minus indebtedness with the result multiplied by percent of ownership), cash and bank accounts, and other investments. Family indebtedness is then subtracted from this sum and the result is defined as net worth.

Net worth of business or farm	Amount assumed to be available
$ 1 - $ 20,000 -	40% of net worth
20,001 - 60,000 -	$ 8,000 plus 50% of excess over $ 20,000
60,001 - 100,000 -	28,000 plus 60% of excess over 60,000
100,001 or more -	52,000 plus 70% of excess over 100,000

Once net worth is computed, then effective supplementary income can be figured. The following equation is employed:

Net Worth
- Retirement Allowance
= Discretionary Net Worth

x Conversion percentage
= Effective Supplementary Income

Social security does not provide for a "moderate" level of income for retired persons, so CSS makes an adjustment for retirement allowance in the formulation of effective supplementary income. A sample table employed by CSS in the determination of the retirement allowance follows:

Retirement Allowances:

Age	Two-parent family (father's age)	One-parent family (mother's age)
40	$ 6,400	$ 8,600
41	6,500	8,800
42	6,700	9,100
43	6,900	9,300
44	7,100	9,600
45	7,400	9,900

Retirement Allowances: (cont.)

Age	Two-parent family (father's age	One-parent family (mother's age)
46	$ 7,600	$10,200
47	7,800	10,500
48	8,100	10,800
49	8,300	11,100
50	8,600	11,500
51	8,900	11,800
52	9,200	12,200
53	9,500	12,600
54	9,900	13,000
55	10,200	13,500
56	10,600	14,000
57	11,100	14,500
58	11,500	15,000
59	12,000	15,600
60	12,600	16,200
61	13,100	16,900
62	13,800	17,600
63	14,500	18,400
64	15,300	19,200
65	16,100	20,200

Thus, the retirement allowance is subtracted from the net worth to calculate discretionary net worth. The discretionary net worth is then multiplied by a conversion coefficient to result in total supplementary income. The coefficient is based on the age of the head of the household, and is positive only if family assets are sufficient to provide for a retirement allowance. If the discretionary net worth is negative--meaning that insufficient funds exist for adequate retirement--then the coefficient is used to alter effective income by subtracting the result. This is termed a negative income supplement. The conversion table follows:

Conversion of discretionary net worth:

	Percent of discretionary net worth			
	Male, head of household		Mother sole support	
Age	Negative	Positive	Negative	Positive
40-44	7	12	3	7
45-49	9	11	4	6
50-54	10	10	5	5
55-59	11	9	6	4
60 and above	12	7	7	3

The result of the computation is the net worth that is convertible to income. Thus, if the discretionary net worth is positive, the positive percentage figure is employed, and the result added to the effective income of the family. If discretionary net worth is negative, the negative conversion percentage figure is used, and the result is subtracted from effective income.

Adjusted effective income:

Effective income
+ Income supplement (positive or negative)
= Adjusted effective income

The next process in the computation of the parental contribution is the determination of the expected parental contribution from the adjusted effective income. CSS employs Bureau of Labor Statistics figures to ascertain the basic living expense that should be contributed by the parents. At the moderate level of income (see table, p. 72), a family would be expected to contribute $1,150 in living expenses to a child over a 9-month period. Below the moderate level, families would be expected to contribute $250; and at the low income level, families would be expected to contribute -$500 to the living expeses of a child. These figures are extracted from the following table that is used by CSS to determine how large the parental contribution should be. The Bureau of Labor Statistics figures that the calculations are based on are adjusted by family ratio figures supplied by the Social Security Administration, and by the Consumer Price Index.

Table E. Total parents' contribution from adjusted effective income, by size of family*

Adjusted effective income	Number of dependent children 1	2	3	4	5	6	7	8	9	10
$ 1,875–$ 2,124	$–500	$–500	$–500	$–500	$–500	$ –500	$ –500	$ –500	$ –500	$ –500
2,125– 2,374	–500	–500	–500	–500	–500	–500	–500	–500	–500	–500
2,375– 2,624	–500	–500	–500	–500	–500	–500	–500	–500	–500	–500
2,625– 2,874	–500	–500	–500	–500	–500	–500	–500	–500	–500	–500
2,875– 3,124	–500	–500	–500	–500	–500	–500	–500	–500	–500	–500
3,125– 3,374	–431	–500	–500	–500	–500	–500	–500	–500	–500	–500
3,375– 3,624	–361	–500	–500	–500	–500	–500	–500	–500	–500	–500
3,625– 3,874	–290	–447	–500	–500	–500	–500	–500	–500	–500	–500
3,875– 4,124	–220	–394	–492	–500	–500	–500	–500	–500	–500	–500
4,125– 4,374	–149	–340	–445	–500	–500	–500	–500	–500	–500	–500
4,375– 4,624	–79	–287	–398	–467	–500	–500	–500	–500	–500	–500
4,625– 4,874	–8	–233	–350	–424	–490	–500	–500	–500	–500	–500
4,875– 5,124	62	–179	–303	–380	–449	–490	–500	–500	–500	–500
5,125– 5,374	132	–126	–256	–336	–409	–452	–492	–500	–500	–500
5,375– 5,624	203	–72	–208	–293	–369	–414	–456	–487	–500	–500
5,625– 5,874	273	–19	–161	–249	–329	–376	–420	–452	–479	–497
5,875– 6,124	344	35	–113	–206	–289	–338	–383	–418	–445	–464
6,125– 6,374	414	88	–66	–162	–249	–300	–347	–383	–412	–432
6,375– 6,624	485	142	–19	–119	–209	–262	–311	–348	–378	–398
6,625– 6,874	555	195	29	–75	–169	–224	–275	–314	–345	–364
6,875– 7,124	626	249	76	–32	–129	–186	–239	–279	–311	–333
7,125– 7,374	696	317	123	12	–89	–148	–203	–244	–278	–301
7,375– 7,624	767	385	171	55	–49	–110	–167	–209	–244	–268
7,625– 7,874	837	453	218	99	–9	–72	–131	–175	–210	–235
7,875– 8,124	908	521	271	142	31	–34	–94	–140	–177	–202
8,125– 8,374	978	589	331	186	71	4	–58	–105	–143	–170
8,375– 8,624	1,049	657	391	229	111	42	–22	–71	–110	–137
8,625– 8,874	1,119	725	451	279	151	80	14	–36	–76	–104
8,875– 9,124	1,185	793	512	334	191	118	50	–1	–43	–71
9,125– 9,374	1,247	861	572	390	231	156	86	33	–9	–39
9,375– 9,624	1,310	929	632	445	280	194	122	68	24	–6
9,625– 9,874	1,372	997	692	501	336	232	158	103	58	27
9,875– 10,124	1,440	1,066	753	557	392	278	195	138	92	60
10,125– 10,374	1,513	1,134	813	612	447	330	231	172	125	92
10,375– 10,624	1,585	1,197	873	668	503	383	274	207	159	125
10,625– 10,874	1,658	1,260	933	723	559	436	325	242	192	158
10,875– 11,124	1,737	1,322	994	779	615	489	375	288	226	191
11,125– 11,374	1,822	1,385	1,054	834	671	542	426	336	264	225
11,375– 11,624	1,907	1,455	1,114	890	727	595	476	384	311	259
11,625– 11,874	1,992	1,527	1,175	945	783	648	526	433	358	305
11,875– 12,124	2,086	1,600	1,237	1,001	839	701	577	481	405	350
12,125– 12,374	2,186	1,672	1,300	1,056	895	754	627	529	452	396
12,375– 12,624	2,286	1,754	1,362	1,112	951	807	678	578	499	441
12,625– 12,874	2,386	1,839	1,429	1,170	1,007	860	728	626	546	487

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*The figures given for expected parents' contribution are values at the midpoint of the ranges of adjusted effective income. The minus sign efore a figure indicates a "negative contribution" (see Chapter 2 for explanation).

Table E. Total parents' contribution from adjusted effective income, by size of family* (continued)

Adjusted effective income	Number of dependent children									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
$12,875–$13,124	$2,495	$1,924	$1,501	$1,232	$1,063	$ 913	$ 779	$ 674	$ 593	$ 532
13,125– 13,374	2,613	2,009	1,574	1,295	1,119	966	829	723	640	578
13,375– 13,624	2,730	2,106	1,646	1,357	1,177	1,018	879	771	686	624
13,625– 13,874	2,848	2,206	1,724	1,423	1,240	1,071	930	819	733	669
13,875– 14,124	2,977	2,306	1,809	1,495	1,302	1,124	980	868	780	715
14,125– 14,374	3,114	2,406	1,894	1,568	1,365	1,182	1,031	916	827	760
14,375– 14,624	3,252	2,519	1,979	1,640	1,431	1,245	1,081	964	874	806
14,625– 14,874	3,389	2,636	2,070	1,717	1,504	1,307	1,132	1,013	921	851
14,875– 15,124	3,527	2,754	2,170	1,802	1,576	1,370	1,190	1,061	968	897
15,125– 15,374	3,664	2,871	2,270	1,887	1,649	1,437	1,252	1,109	1,015	943
15,375– 15,624	3,802	3,004	2,370	1,972	1,727	1,510	1,315	1,160	1,062	988
15,625– 15,874	3,939	3,142	2,477	2,062	1,812	1,582	1,377	1,222	1,109	1,034
15,875– 16,124	4,077	3,279	2,594	2,162	1,897	1,655	1,446	1,285	1,157	1,079
16,125– 16,374	4,214	3,417	2,712	2,262	1,982	1,734	1,518	1,347	1,220	1,125
16,375– 16,624	4,352	3,554	2,829	2,362	2,074	1,819	1,591	1,411	1,282	1,177
16,625– 16,874	4,489	3,692	2,955	2,467	2,174	1,904	1,663	1,484	1,345	1,240
16,875– 17,124	4,627	3,829	3,092	2,585	2,274	1,989	1,744	1,556	1,408	1,302
17,125– 17,374	4,764	3,967	3,230	2,702	2,374	2,082	1,829	1,629	1,481	1,365
17,375– 17,624	4,902	4,104	3,367	2,820	2,481	2,182	1,914	1,703	1,553	1,431
17,625– 17,874	5,039	4,242	3,505	2,944	2,599	2,282	1,999	1,788	1,626	1,504
17,875– 18,124	5,177	4,379	3,642	3,081	2,716	2,382	2,094	1,873	1,700	1,576
18,125– 18,374	5,314	4,517	3,780	3,219	2,834	2,491	2,194	1,958	1,785	1,649
18,375– 18,624	5,452	4,654	3,917	3,356	2,960	2,608	2,294	2,046	1,870	1,727
18,625– 18,874	5,589	4,792	4,055	3,494	3,098	2,726	2,394	2,146	1,955	1,812
18,875– 19,124	5,727	4,929	4,192	3,631	3,235	2,843	2,505	2,246	2,042	1,897
19,125– 19,374	5,864	5,067	4,330	3,769	3,373	2,971	2,622	2,346	2,142	1,982
19,375– 19,624	6,002	5,204	4,467	3,906	3,510	3,109	2,740	2,448	2,242	2,074
19,625– 19,874	6,139	5,342	4,605	4,044	3,648	3,246	2,857	2,566	2,342	2,174
19,875– 20,124	6,277	5,479	4,742	4,181	3,785	3,384	2,988	2,683	2,444	2,274
20,125– 20,374	6,414	5,617	4,880	4,319	3,923	3,521	3,125	2,801	2,561	2,374
20,375– 20,624	6,552	5,754	5,017	4,456	4,060	3,659	3,263	2,922	2,679	2,481
20,625– 20,874	6,689	5,892	5,155	4,594	4,198	3,796	3,400	3,059	2,796	2,599
20,875– 21,124	6,827	6,029	5,292	4,731	4,335	3,934	3,538	3,197	2,916	2,716
21,125– 21,374	6,964	6.167	5,430	4,869	4,473	4,071	3,675	3,334	3,054	2,834
21,375– 21,624	7,102	6,304	5,567	5,006	4,610	4,209	3,813	3,472	3,191	2,960
21,625– 21,874	7,239	6,442	5,705	5,144	4,748	4,346	3,950	3,609	3,329	3,098
21,875– 22,124	7,377	6.579	5,842	5,281	4,885	4,484	4,088	3,747	3,466	3,235
22,125– 22,374	7,514	6,717	5,980	5,419	5,023	4,621	4,225	3,884	3,604	3,373
22,375– 22,624	7,652	6,854	6,117	5,556	5,160	4,759	4,363	4,022	3,741	3,510
22,625– 22,874	7,789	6,992	6,255	5,694	5,298	4,896	4,500	4,159	3,879	3,648
22,875– 23,124	7,927	7,129	6,392	5,831	5,435	5,034	4,638	4,297	4,016	3,785
23,125– 23,374	8,064	7,267	6,530	5,969	5,573	5,171	4,775	4,434	4,154	3,923
23,375– 23,624	8,202	7,404	6,667	6,106	5,710	5,309	4,913	4,572	4,291	4,060
23,625– 23,874	8,339	7,542	6,805	6,244	5,848	5,446	5,050	4,709	4,429	4,198
23,875– 24,124	8,477	7,679	6,942	6,381	5,985	5,584	5,188	4,847	4,566	4,335
24,125– 24,374	8,614	7,817	7,080	6,519	6,123	5,721	5,325	4,984	4,704	4,473
24,375– 24,624	8,752	7,954	7,217	6,656	6,260	5,859	5,463	5,122	4,841	4,610
24,625– 24,874	8,889	8,092	7,355	6,794	6,398	5,996	5,600	5,259	4,979	4,748

Table E. Total parents' contribution from adjusted effective income, by size of family (continued)

Adjusted effective income	Number of dependent children									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
$24,875– 25,124	$ 9,027	$ 8,229	$ 7,492	$6,931	$6,535	$6,134	$5,738	$5,397	$5,116	$4,885
25,125– 25,374	9,164	8,367	7,630	7,069	6,673	6,271	5,875	5,534	5,254	5,023
25,375– 25,624	9,302	8,504	7,767	7,206	6,810	6,409	6,013	5,672	5,391	5,160
25,625– 25,874	9,439	8,642	7,905	7,344	6,948	6,546	6,150	5,809	5,529	5,298
25,875– 26,124	9,577	8,779	8,042	7,481	7,085	6,684	6,288	5,947	5,666	5,435
26,125– 26,374	9,714	8,917	8,180	7,619	7,223	6,821	6,425	6,084	5,804	5,573
26,375– 26,624	9,852	9,054	8,317	7,756	7,360	6,959	6,563	6,222	5,941	5,710
26,625– 26,874	9,989	9,192	8,455	7,894	7,498	7,096	6,700	6,359	6,079	5,848
26,875– 27,124	10,127	9,329	8,592	8,031	7,635	7,234	6,838	6,497	6,216	5,985
27,125– 27,374	10,264	9,467	8,730	8,169	7,773	7,371	6,975	6,634	6,354	6,123
27,375– 27,624	10,402	9,604	8,867	8,306	7,910	7,509	7,113	6,772	6,491	6,260
27,625– 27,874	10,539	9,742	9,005	8,444	8,048	7,646	7,250	6,909	6,629	6,398
27,875– 28,124	10,677	9,879	9,142	8,581	8,185	7,784	7,388	7,047	6,766	6,535
28,125– 28,374	10,814	10,017	9,280	8,719	8,323	7,921	7,525	7,184	6,904	6,673
28,375– 28,624	10,952	10,154	9,417	8,856	8,460	8,059	7,663	7,322	7,041	6,810
28,625– 28,874	11,089	10,292	9,555	8,994	8,598	8,196	7,800	7,459	7,179	6,948
28,875– 29,124	11,227	10,429	9,692	9,131	8,735	8,334	7,938	7,597	7,316	7,085
29,125– 29,374	11,364	10,567	9,830	9,269	8,873	8,471	8,075	7,734	7,454	7,223
29,375– 29,624	11,502	10,704	9,967	9,406	9,010	8,609	8,213	7,872	7,591	7,360
29,625– 29,874	11,639	10,842	10,105	9,544	9,148	8,746	8,350	8,009	7,729	7,498

The general model for assessing parental contribution ability is gauged by multiplying the adjusted effective income above the "moderate" income level by employing the following schematic:

Discretionary income	Expected contribution rate
Not over $1,000	25% of discretionary income
$1,000 to $2,000	$250 plus 29% of all over $1,000
$2,000 to $3,000	$540 plus 34% of all over $2,000
$3,000 to $4,000	$880 plus 40% of all over $3,000
$4,000 to $5,000	$1,280 plus 47% of all over $4,000
$5,000 to $6,000	$1,750 plus 55% of all over $5,000
$6,000 or more	$2,300 plus 55% of all over $6,000

The dependent applicant is also expected to make a contribution from his personal earnings under the CSS system. The following table indicates the expected applicant contribution from summer earnings:

	Men	Women
Prefreshman	$400	$300
Presophomore	500	400
Prejunior	600	500
Presenior	600	500

Regional adjustments are made depending on the employment and economic situation in the area.

The dependent applicant's assets are also taken into consideration. Total assets are divided by the years remaining in school and added to the parent's assets to gauge total family assets. This figure is then subjected to the calculation that were previously described.

2. Need analysis for the emancipated student.

The College Scholarship Service provides an independent analysis of financial need for those students who are defined as emancipated under the U.S. Office of Education guidelines. Those guidelines provide that an emancipated student must be one who:

a. Has not and will not be claimed for federal income tax purposes by any person except his or her spouse for the calendar year in which aid is received and the calendar year prior to the academic year for which aid is requested.

b. Has not received and will not receive financial assistance of more than $600 from his or her parent(s) in the calendar year in which aid is received and the calendar year prior to the academic year for which aid is requested.

c. Has not lived or will not live for more than two consecutive weeks in the home of a parent during the calendar year in which aid is received and the calendar year prior to the academic year for which aid is requested.

Meeting the preceding criteria is a prerequisite for classification as an independent student for all federal student financial assistance

programs. CSS assumes the federal criteria in determining dependent status.

CSS makes some basic assumptions in their model for analyzing student financial need:

a. Students who apply for financial assistance have determined that education is the most important expenditure they can make. Therefore, it is reasonable to expect that a significant proportion of a students' assets should go towards financing an education.

b. If a student assumes family responsibility or is participating in a graduate program, it becomes necessary for him to protect a portion of his assets.

c. An emancipated student received no pecuniary aid from his parents. Therefore, no parental contribution or parental financial deficiency is taken into account.

The methodology that CSS applies to the analysis of independent student need is similar to the model employed in determining parental contribution. Essentially, the student's financial base is calculated as adjusted taxable income plus adjusted student assets. The model functions as follows:

Adjusted taxable income

+ taxable income
- federal income tax
- state income tax
- social security tax
- working spouse allowance
- dependent allowance
= taxable income after allowance

Adjusted students assets

+ residence equity
+ real estate equity
+ business or farm equity
+ cash and bank accounts
+ other investment
+ debt outstanding
+ net worth
- asset allowance
x conversion %
= student contribution from assets

Total student contribution = adjusted taxable income + adjusted student assets.

The College Scholarship Service provides a systematic method of assessing student and parental assets. A number of its provisions have been subject to controversy--notably the property equity assessment and its treatment of farm equity, but it remains a significant force in college financial aid.

B. Basic Educational Opportunity Grant Program

Financial need assessment procedures form a fundamental part of the Federal Basic Educational Opportunity Grant Program, under Part A of Title IV of the Higher Education Act of 1965. The United States Commissioner of Education (with the approval of the Secretary of Health, Education and Welfare) establishes the method by which financial need and net income are determined. The B.E.O.G. system differs from the CSS system in several technical aspects--treatment of indebtedness, residence and farm equity, etc., and is periodically reviewed by the Department of Health, Education and Welfare.

The essential parts of the B.E.O.G. assessment program are included in the following pages taken from the Federal Register of July 2, 1974:

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

[45 CFR Part 190]

BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM

Expected Family Contribution for 1975–1976 Academic Year

Pursuant to the authority contained in the subpart 1 of part A of Title IV of the Higher Education Act of 1965 as amended (20 U.S.C. 1070a) notice is hereby given that the Commissioner of Education, with the approval of the Secretary of Health, Education, and Welfare, proposes to issue the following regulations as an amendment to 45 CFR Part 190, covering the basis for determining the expected family contribution of both dependent and independent students for academic year 1975–76. The regulations appear below in their entirety.

These regulations are being submitted for public comment and review by both Houses of Congress in advance of the February 1 deadline specified in section 411(a) of the Higher Education Act of 1965 as amended (20 U.S.C. 1070(a)) so that review of the Schedules may be completed earlier than May 1, which is the date listed in the statute.

It is the opinion of the Commissioner that the May 1 deadline for Congressional action does not permit students, parents, and educational institutions sufficient time to make effective decisions concerning the packaging of student financial aid resources. This opinion is also shared by the House Special Subcommittee on Education, and legislation has been introduced which, if adopted, would require that the Commissioner submit the Family Contribution Schedules, to be used for Fiscal Year 1976, no later than July 1, 1974, and would give the Congress until October 1, 1974, to review the proposed Schedules. Although this legislation has not yet been enacted into law, the Commissioner has testified in support of it and is submitting the Family Contribution Schedules at this time.

The Schedules submitted for use in academic year 1975–76 are identical to those in use during academic year 1974–75. It is realized that changes in the Family Contribution Schedules will need to be considered as comments are received by the Office of Education on the basis of experience gained regarding the effect of the Schedules during academic year 1974–75.

Interested persons are invited to submit written comments, suggestions, or objections regarding the proposed rules to Mr. Peter K. U. Voigt, Director, Division of Basic Grants, U.S. Office of Education, Room 5678, ROB–3, 400 Maryland Avenue, SW, Washington, D.C. 20202. All relevant material received on or before September 3, 1974, will be considered. Comments received will be available for public inspection at the above office Monday through Friday between 8 a.m. and 4:30 p.m.

(Catalogue of Federal Domestic Assistance Program Number 13.539, Basic Educational Opportunity Grant Program)

Dated: June 18, 1974.

Peter P. Muirhead,
Acting U.S. Commissioner of Education.

Approved: June 26, 1974.

Caspar W. Weinberger,
Secretary of Health, Education, and Welfare.

It is proposed to amend Subparts C and D of 45 CFR Part 190 to read as set forth below.

Subpart C—Expected Family Contribution for Dependent Students

Sec.
190.31 Indicators of financial strength.
190.32 Special definitions.
190.33 The expected family contribution for dependent students from parents' income.
190.34 Computation of expected contribution from the student's effective income.
190.35 Computation of standard expected contribution from parents' assets.
190.36 Computation for expected contribution from parents' income and assets, adjusted for number of family members attending institutions of postsecondary education.
190.37 Computation of expected contribution from the student's assets.
190.38 Computation of the total expected family contribution.

Subpart C—Expected Family Contribution for Dependent Students

§ 190.31 Indicators of financial strength.

"Expected family contribution" with respect to each dependent student means the amount which the family of that student may reasonably be expected to contribute toward the cost of his education for an academic year. Each of the following elements of financial strength will be considered in determining the family contribution for dependent students:

(a) The amount of the effective income of the student.

(b) The amount of the effective income of the student's parent(s).

(c) The number of dependents of the student's parent(s).

(d) The number of dependents of the student's parent(s) who are in attendance, on at least a half-time basis, in a program of postsecondary education.

(e) The amount of assets of the student.

(f) The amount of assets of the student's parent(s).

(g) Unusual expenses of the student and the unusual expenses of the student's parent(s). Such unusual expenses shall be limited to medical and dental expenses and expenses arising from catastrophe.

(h) The additional expenses incurred in providing an income when two parents are employed or when a family is headed by a single parent.

(20 U.S.C. 1070a(a)(3)(B)(ii))

§ 190.32 Special definitions.

For purposes of this subpart:

(a)(1) "Annual adjusted family income" for any base year means the sum of the following: Adjusted gross income as defined in section 62 of the Internal Revenue Code of the student's parents, whether or not the parents file an income tax return, investment income of the student's parents upon which no Federal income tax is required to be paid such as interest on municipal and State bonds, other income of the parents upon which no Federal income tax is required to be paid such as child support payments, income of the parents received under income maintenance programs including welfare benefits, social security benefits paid to the student's parents except those educational benefits paid on account of the student or other members of the student's family, and Veteran's benefits paid to the student's parents except those educational benefits paid on account of the student or other members of the student's family under Chapter 35 of Title 38 of the United States Code.

(2) In the case of the student whose parents are divorced, or are separated and file separate returns for Federal income tax purposes, only the income as described in subparagraph (1) of paragraph (a) of this section of the parent who provides more than one-half of the student's support for the base year shall be considered in determining the annual adjusted family income. If no parent provides more than one-half of the support of the student, only the income as described in subparagraph (1) of paragraph (a) of this section of the parent who provides the greater amount of that student's financial support in the base year shall be considered in determining the annual adjusted family income.

(3) In the case of the student whose parents are married, and not separated and file separate returns for Federal income tax purposes, the income as described in subparagraph (1) of paragraph (a) of this section of both parents shall be combined to determine the annual adjusted family income for that student.

(b) "Assets" means cash on hand including amounts in checking accounts, savings accounts and trusts, the current market value at the time of application of stocks, bonds, any other securities, real estate, home (if owned), income producing property, business equipment and business inventory which are held by the student's parents and by the student.

(c) "Base year" means the tax year for which information is requested by the Commissioner for the purpose of determining family income.

(d) "Dependent student" means any student who does not qualify as an independent student as defined in § 190.42 (a).

(e) "Effective income of the student" means any amount paid to or on account of, the student under the Social Security Act which would not be paid if he were not a student, i.e., under section 202(d) of title II of the Social Security Act, 42 U.S.C. 402(d), and one-half of any amount paid the student under chapter 34 of title 38, United States Code (Veterans Educational Assistance—38 U.S.C.

1651 et seq.) and chapter 35 of title 38, United States Code, War Orphans' and Widows' Education Assistance—38 U.S.C. 1700 et seq.). The amount of the effective income of the student is the amount to be received during the academic year for which Basic Grant assistance is requested.

(20 U.S.C. 1070a(a) (3) (B) (iv))

(f) "Effective family income" of a student's parents means the annual adjusted family income received for the base year minus the Federal income tax paid or payable with respect to such income during the base year.

(20 U.S.C. 1070a(a) (3) (B) (iii))

(g) "Employment expenses offset" means an allowance to meet expenses relating to employment where both parents are employed or where one parent qualifies as a surviving spouse or as head of a household under section 2 of the Internal Revenue Code.

(h) "Expenses arising from catastrophe" means those types and amounts of casualty losses which may be deducted under section 165(c) (3) of the Internal Revenue Code which were incurred during the base year by the student, the parents of the student and the parents' dependents.

(20 U.S.C. 1070a(a) (3) (B) (ii) (V))

(i) "Family size offset" means an allowance to meet subsistence expenses, including food, shelter, clothing, and other basic needs of a family. For purposes of this part the "Weighted Average Threshold at the Low Income Level," as developed by the Social Security Administration shall be used as a basis to determine the amount for the family size offset.

(j) "Federal income tax" means the tax on income paid to the U.S. Government under chapter 2 of the Internal Revenue Code and the tax on income paid to the Governments of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands under the laws applicable to those jurisdictions.

(20 U.S.C. 1070a(a) (3) (B) (iii))

(k) "Medical expenses" means those types of medical and dental expenses, except premiums for medical insurance, that may be deducted under section 213 of the Internal Revenue Code which were incurred during the base year by the student, the parents of the student and the parents' dependents.

(l) "Net assets" means the current market value of the assets included in paragraph (b) of this section, minus the outstanding liabilities (indebtedness) against such assets at the time of application.

(m) "Parent" means the mother or father of the student, unless any other person, except the student's spouse, provides more than one-half of the student's support and claims or is eligible to claim the student as an exemption for Federal income tax purposes for the base year, in which case such person shall be considered the parent.

(n) "Student's parents' dependents" means any of the following persons for whom the parents provide or will provide during the calendar year in which the student applies to have his expected family contribution determined more than one half of support: (1) Any other children of the student's parents; (2) any other persons related to the student's parents by blood or marriage; or (3) any person living with the parents.

(20 U.S.C. 1070a(a) (3) (B) unless otherwise noted)

§ 190.33 The expected family contribution for dependent students from parents' income.

The expected family contribution for dependent students from parents' income for each grant shall be an amount determined in the following manner:

(a) Determine the effective family income of the student's parents.

(b) Add to the amount determined in paragraph (a) of this section the effective income of the student attributable to the dependents of the student who is a veteran.

(c) Determine discretionary income by deducting from the amount calculated in paragraph (b) of this section the following:

(1) *Family size offset.* A family size offset is the amount specified in the following table. Family size includes the student, the student's parents and the student's parents' dependents. If the parents are divorced or separated, family size shall include the student and any parent whose income is taken into account for the purpose of computing the annual adjusted family income and that parent's dependents.

FAMILY SIZE OFFSETS

Family size	*Dollar amount*
2	3050
3	3650
4	4650
5	5500
6	6200
7	6900
8	7600
9	8300
10	9000
11	9700
12	10400

(2) *Unusual expenses.* The amount by which the sum of medical and dental expenses and losses resulting from catastrophes incurred in the base year and not compensated by insurance exceeds 20 percent of effective family income. Unusual expenses may be deducted if they were incurred by the student, the student's parents or the student's parents' dependents.

(3) *Employment expense offset.* An employment expense offset in an amount equal to 50 percent of the adjusted gross income earned in the base year by the parent earning the lesser income if both parents are employed, or 50 percent of the adjusted gross income earned in the base year of a parent qualifying as surviving spouse or as head of household as defined in section 2 of the Internal Revenue Code, but in no case shall such an offset exceed $1,500. The expense may be claimed only if the income of both parents or the income of the surviving spouse or head of household is taken into account for the purposes of computing the annual adjusted family income.

(d) To determine the expected family contribution from parental income the following rates shall be applied to discretionary income:

$0	(No contribution expected.)
$1 to 4,999	20 percent of Discretionary Income.
$5,000 or more	$1,000 plus 30 percent of Discretionary Income in excess of 5,000.

(20 U.S.C. 1070(a) (3) (B))

§ 190.34 Computation of expected contribution from the student's effective income.

(a) Except as provided for in paragraph (b) of this section the expected family contribution shall include 100 percent of the student's effective income for the academic year for which aid is requested: *Provided,* That, that portion of effective income of the student attributable to the dependents of a veteran shall instead be included as a part of the discretionary income of the student's parents.

(b) (1) The contribution from the student's effective income calculated in paragraph (a) of this section shall be reduced by the amount of negative discretionary income as defined in subparagraph (2) of paragraph (b) of this section.

(2) The amount of negative discretionary income is the amount by which the sum of deductions for offsets and expenses set forth in § 190.33(c) (1) through § 190.33(c) (3) exceeds the amount of family income determined in § 190.33(b).

(20 U.S.C. 1070a(a) (3) (B))

§ 190.35 Computation of standard expected contribution from parents' assets.

(a) Except as provided for in paragraph (b) of this section, the expected contribution from parental assets shall be an amount determined in the following manner:

(1) Determine the net assets owned by the parents.

(2) Deduct an asset reserve of $7500 from net assets as determined in subparagraph (1) of paragraph (a) of this section.

(3) The contribution from parental assets shall be an amount equal to 5 percent of the remainder obtained in subparagraph (2) of paragraph (a) of this section.

(b) Where the calculations required by § 190.33(c) produce an amount of negative discretionary income as defined in § 190.34(b) (2), the expected contribution from parents' assets, calculated in subparagraph (3) of paragraph (a) of this section, shall be reduced by the

amount of such negative discretionary income except to the extent that pursuant to § 190.34(b)(1) such income was used to offset the expected contribution from the student's effective income.

(c) If the student's parents are divorced or separated only the assets of the parent whose income is taken into account for the purpose of computing annual adjusted family income shall be considered.

(20 U.S.C. 1070a(a)(3)(B).)

§ 190.36 Computation for expected contribution from parents' income and assets, adjusted for number of family members attending institutions of postsecondary education.

(a) For each grant the amount expected from parents' income as determined in § 190.33 shall be added to the amount expected from parents' assets as determined in § 190.35.

(b) For each grant the combined expectation calculated on the basis of the above formula shall be further adjusted in the following manner to take into consideration the number of family members who will be in attendance, on at least a half-time basis, in programs of postsecondary education during the academic year for which basic grant assistance is required:

Number of family members attending institutions of postsecondary education	*Expected contribution from combined contribution per student*
1	100 percent of contribution from the amount determined in paragraph (a) of this section.
2	70 percent of contribution from the amount determined in paragraph (a) of this section.
3	50 percent of contribution from the amount determined in paragraph (a) of this section.
4 or more	40 percent of contribution from the amount determined in paragraph (a) of this section.

Family members include the student, the student's parents and the student's parents' dependents. When the student's parents are divorced or separated and are filing separate returns for Federal income tax purposes, family members shall include the student and any parent whose income is taken into account for the purpose of computing annual adjusted family income and that parents' dependents.

(20 U.S.C. 1070a(a)(3)(B))

§ 190.37 Computation of expected contribution from student's assets.

For each grant the contribution from the student's assets shall be an amount equal to 33 per centum of his net assets as defined in § 190.32(1).

(20 U.S.C. 1070a(a)(3)(B))

§ 190.38 Computation of the total expected family contribution.

For each grant the total expected family contribution shall be the sum of:

(a) The expected contribution from the student's effective income as determined in § 190.34.

(b) The expected contribution from parents' discretionary income and parents' assets as determined in § 190.36.

(c) The expected contribution from the student's assets as determined in § 190.37.

Subpart D—Expected Family Contribution for Independent Students

Sec.
190.41 Indicators of financial strength.
190.42 Special definitions.
190.43 The expected family contribution for independent students from annual adjusted family income.
190.44 Computation of the expected family contribution from effective income for independent students.
190.45 Computation of expected contribution from the assets of the independent student and his or her spouse.
190.46 Computation for expected contribution from income and assets, adjusted for number of family members attending institutions of postsecondary education.
190.47 Computation of the total expected family contribution.

Subpart D—Expected Family Contribution for Independent Students

§ 190.41 Indicators of financial strength.

"Expected Family Contribution" with respect to each independent student means the amount which that student, and his or her spouse, if any, may reasonably be expected to contribute toward the cost of his or her education for an academic year. Each of the following elements of finanical strength will be considered in determining the family contribution for independent students:

(a) The amount of effective income of the independent student.

(b) The amount of annual adjusted family income of the independent student and the independent student's spouse.

(c) The number of persons whom the independent student can claim as an exemption.

(d) The number of dependents of the independent student who in addition to the student will be in attendance, on at least a half-time basis, in a program of postsecondary education.

(e) The amount of the assets of the independent student and his or her spouse.

(f) The unusual expenses of the independent student, and his or their dependents. Such unusual expenses shall be limited to medical and dental expenses and expenses arising from catastrophe.

(g) The additional expenses incurred in providing an income where both the independent student and his spouse are employed or where the independent student qualifies as a surviving spouse or as head of a household under section 2 of the Internal Revenue Code.

(20 U.S.C. 1070a(a)(3)(C))

§ 190.42 Special definitions.

For the purposes of this subpart:

(a) "Independent Student" means a student who:

(1) Has not and will not be claimed as an exemption for Federal income tax purposes by any person except his or her spouse for the calendar year(s) in which aid is received and the calendar year prior to the academic year for which aid is requested,

(2) Has not received and will not receive financial assistance of more than $600 from his or her parent(s) in the calendar year(s) in which aid is received and the calendar year prior to the academic year for which aid is requested, and

(3) Has not lived or will not live for more than 2 consecutive weeks in the home of a parent during the calendar year in which aid is received and the calendar year prior to the academic year for which aid is requested.

(b) (1) "Annual Adjusted Family Income" for any base year means the sum of the following: Adjusted gross income as defined in section 62 of the Internal Revenue Code of the student and the student's spouse, whether or not the student or the student's spouse files an income tax return, investment income upon which no Federal income tax is required to be paid such as interest on municipal and State bonds, other income of the student and the student's spouse upon which no Federal income tax is required to be paid such as child support payments, income of the student and the student's spouse received under income maintenance programs including welfare benefits, social security benefits except those benefits paid to or on account of the student included in paragraph (f) of this section, and veteran's benefits except those veteran's benefits paid to the independent student under chapters 34 and 35 of title 38 of the United States Code.

(2) In the case of the student who is divorced, or is separated only the student's own income shall be considered in determining the annual adjusted family income.

(3) In the case where the student and his spouse are married and not separated but file separate returns for Federal income tax purposes, the income as described in subparagraph (1) of paragraph (b) of this section of both the applicant and spouse shall be combined to determine the annual adjusted family income for that student.

(c) "Assets" means cash on hand including amounts in checking accounts, savings accounts and trusts, the current market value at the time of application of stocks, bonds, and other securities, real estate, home (if owned), income producing property, business equipment and business inventory which are held by the independent student and/or his spouse.

(d) "Base year" means the tax year for which information is requested by the Commissioner for the purpose of determining family income.

(e) "Dependent" means the independent student's spouse and any of the following persons for whom the student or his spouse provides or will provide during the calendar year in which the student

applies to have his expected family contribution determined more than one-half of support:

(1) Any children of the student or his spouse; (2) any other persons related to the student or his spouse by blood or marriage; or (3) any person living with the student and his spouse.

(f) The "effective income of the student" means any amount paid to, or on account of, the student under the Social Security Act which would not be paid if he were not a student; i.e., under section 202(d) of title II of the Social Security Act, 42 U.S.C. 402(d), and one-half of any amount paid the student under chapter 34 of title 38, United States Code (Veterans Educational Assistance—38 U.S.C. 1651 et seq.) and chapter 35 of title 38, United States Code (War Orphans' and Widows' Education Assistance—38 U.S.C. 1700 et seq.). The amount of the effective income of the student is the amount to be received during the academic year for which basic grant assistance is requested.

(g) "Effective family income" means the annual adjusted family income received during the base year minus the Federal income tax paid or payable with respect to such income.

(h) "Employment expense offset" means an allowance to meet expenses relating to employment where both the independent student and his or her spouse are employed or where the independent student qualifies as a surviving spouse or as head of a household under section 2 of the Internal Revenue Code.

(i) "Expenses arising from catastrophe" means those types and amounts of casualty losses which may be deducted under section 165(c)(3) of the Internal Revenue Code which were incurred by the independent student and his dependents during the base year.

(j) "Family size offset" means an allowance to meet subsistence expenses, including food, shelter, clothing, and other basic needs of the independent student and his dependents. For purposes of this part the "Weighted Average Thresholds at the Low Income Level," as developed by the Social Security Administration, shall be used as a basis to determine the amount for the family size offset except in the case of a single independent student, where an amount estimated to be equal to living expenses during periods of nonenrollment shall be utilized.

(k) "Federal income tax" means the tax on income paid to the U.S. Government under chapter 2 of the Internal Revenue Code and the tax on income paid to the Governments of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands under the laws applicable to those jurisdictions.

(20 U.S.C. 1070a(a)(3)(B)(iii))

(l) "Medical expenses" means those types of medical and dental expenses, except premiums for medical insurance, that may be deducted under section 213 of the Internal Revenue Code, which were incurred by the independent student and his dependents during the base year.

(m) "Net assets" means the current market value at the time of application of the assets included in paragraph (c) of this section minus the outstanding liabilities (indebtedness) against such assets.

(20 U.S.C. 1070a(a)(3)(C))

§ 190.43 The expected family contribution for independent students from annual adjusted family income.

The expected family contribution of the independent student from annual adjusted family income shall be an amount determined in the following manner:

(a) Determine effective family income by subtracting from the annual adjusted family income (including the portion of the effective income of the student attributable to the dependents of a veteran) the amount of Federal income tax paid or payable with respect to such income.

(b) Determine discretionary income by deducting the following from effective family income:

(1) *Family size offset.* A family size offset is the amount specified in the following table. Family size includes the student and his dependents. If the student is divorced or separated, family size shall include any person whose income is taken into account for the purpose of computing the annual adjusted family income and his or her dependents.

FAMILY SIZE OFFSET

Family size	*Dollar Amount*
2	3050
3	3650
4	4650
5	5500
6	6200
7	6900
8	7600
9	8300
10	9000
11	9700
12	10400

An offset of $850 shall be made for the single independent student.

(2) *Unusual expenses.* The amount by which the sum of medical and dental expenses, and losses resulting from catastrophes incurred in the base year and not compensated by insurance, exceeds 20 percent of effective family income. Unusual expenses may be deducted if they were incurred by the independent student and his dependents during the base year.

(3) *Employment expense offset.* An employment expense offset in an amount equal to 50 percent of the adjusted gross income earned in the base year by either a married independent student or the student's spouse, whoever earns the lesser, or 50 percent of the adjusted gross income earned during the base year by an independent student qualifying as a surviving spouse or as head of household as defined in section 2 of the Internal Revenue Code, but in no case shall such an offset exceed $1,500.

(c) Determine the expected family contribution from the family income of the independent student and his or her spouse by applying the following rates to discretionary income:

(1) 75 percent of discretionary income for the single independent student with no dependents;

(2) 50 percent of discretionary income for the married independent student with no dependents other than spouse; and

(3) 40 percent of discretionary income for the independent student who has dependents other than spouse.

(20 U.S.C. 1070a(a)(3)(C))

§ 190.44 Computation of the expected family contribution from effective income for independent students.

(a) Except as provided for in paragraph (b) of this section, the expected family contribution shall include 100 per centum of the student's effective income for the academic year for which aid is requested; except that, that portion of effective income of the student attributable to the dependents of a veteran shall instead be included as a part of, and treated as, annual adjusted family income.

(b)(1) The contribution from the student's effective income calculated in paragraph (a) of this section shall be reduced by the amount of negative discretionary income as defined in subparagraph (2) of paragraph (b) of this section.

(2) The amount of negative discretionary income is the amount by which the sum of deductions for offsets and expenses set forth in § 190.43(b) exceeds the amount of family income determined in § 190.43(a).

§ 190.45 Computation of expected contribution from the assets of the independent student and his or her spouse.

(a) Except as provided for in paragraph (b) of this section, the expected contribution from the assets of the independent student and his or her spouse shall be determined in the following manner:

(1) Determine the total amount of net assets owned by the student and the student's spouse.

(2) The contribution from assets shall be an arount equal to 33 percent of the amount determined in subparagraph (1) of paragraph (a) of this section.

(b) Where the calculations required by § 190.43(b) produce an amount of negative discretionary income as defined in § 190.44(b)(2), the expected contribution from the assets of the student and his spouse calculated in paragraph (a) of this section shall be reduced by the amount of such negative discretionary income except to that extent that pursuant to § 190.44(b)(1) such income was used to offset the expected contribution from the student's effective income.

§ 190.46 Computation for expected contribution from annual adjusted family income and assets adjusted for number of family members attending institutions of postsecondary education.

(a) For each grant the amount expected from family income as determined in § 190.43 shall be added to the amount expected from assets as determined in § 190.45.

(b) For each grant the combined expectation calculated on the basis of the above formula shall be further adjusted in the following manner to take into consideration the number of family members who will be in attendance, on at least a half-time basis, in programs of postsecondary education during the academic year for which basic grant assistance is requested:

Number of family members attending institutions of postsecondary education	*Expected contribution from combined contribution per student*
1	100 percent of contribution from the amount determined in paragraph (a) of this section.
2	70 percent of contribution from the amount determined in paragraph (a) of this section.
3	50 percent of contribution from the amount determined in paragraph (a) of this section.
4 or more	40 percent of contribution from the amount determined in paragraph (a) of this section.

Family members shall include any person whose income is taken into account for the purpose of computing the annual adjusted family income and his or her dependents.

§ 190.47 Computation of the total expected family contribution.

For each grant the total expected family contribution shall be the sum of:

(a) The expected contribution from the student's effective income as determined in § 190.44, and

(b) The expected contribution from discretionary income and assets, as determined in § 190.46.

APPENDIX

EXPECTED FAMILY CONTRIBUTION FOR DEPENDENT STUDENTS, ACADEMIC YEAR 1975–76

Summary of Calculations

1. Parents' adjusted gross income in 1974 ______
a Amount earned by father ______
b Amount earned by mother ______
2 Other parental income in 1974 + ______
3 Parents' annual adjusted income in 1974 = ______
4 Parents' Federal Income Tax paid for 1974 − ______
5. Effective family income in 1974 = ______
6. Family size offset (table 1) ______
7. Unusual expenses + ______
8. Employment expense offset (table 3) + ______
9. Total offsets against income (lines 6+7+8) + ______
10. Discretionary income (line 5 minus line 9) = ______
11. If line 10 is a positive amount, multiply discretionary income by applicable rate ($1–$4999 @ 20%; $5000 or more, $1000 +30% of amount in excess of $5000) to obtain standard contribution from income. If line 10 is a negative amount, enter 0 ______
12. Effective income of the student (social security and one-half of Veterans benefits) ______
13. If line 10 is a negative amount, enter that amount as a positive number; otherwise enter 0 ______
14. Subtract line 13 from line 12 to obtain contribution from effective income of the student. (May be a negative number.) = ______
15. If line 14 is a negative amount, change to 0; if line 14 is a positive amount, enter as a contribution from the effective income of the student ______
16. Determine net assets of parents ______
17. Subtract asset reserve of $7500 −$7500
18. Available parental assets (line 16 minus line 17) = ______
19. Multiply available parental assets by 0.05 ______
20. Enter line 19 as standard contribution from available parental assets. If line 19 is negative, enter 0 ______
21. If line 14 is negative, enter as a positive amount; if line 14 is 0 or positive, enter 0 ______
22. Subtract line 21 from line 20 to obtain contribution from parental assets ______
23. Add lines 11 and 22 to obtain contribution from parents' income and assets ______
24. Multiply line 23 by multiple student rate to determine expected family contribution for each family in postsecondary education (table 2) ______
25. Determine net assets of student ______
26. Multiply student's net assets by 0.33 ______
27. Student Eligibility Index equals sum of lines 15, 24, and 26 ______

EXPLANATION OF CALCULATION[1]

1. *Parents' adjusted gross income in 1974 (line 1).* All income which is available to the parents should be considered in the evaluation of parental ability to support the cost of postsecondary education. The most valid reference for parental income subject to Federal income tax is the adjusted gross income item in the family's Federal income tax return. This information is readily available to most families, and the information can be verified by referring to the IRS forms actually filed by the parents.

If it may be assumed that family income will be measured on an annual basis, which year of family income shall be used? Parents provide from their current income for the education of their children. However, if we attempted to use current year information, a parent would have to estimate the amount of income which he will receive during a year in which a child is a student since application for aid is made before the student enrolls for a particular year of study. A study by Orwig and Jones shows that income received during the tax year prior to the year in which the student is applying for aid is the best practical indicator of the income from which a student's actual expenses will be paid.[2] If estimates of the income received during the actual year of attendance are provided by parents, middle income families systematically underestimate their earnings, and lower income families systematically overestimate their earnings. The amount to be entered here, therefore, is from the previous year's Federal income tax form.

2. *Other parental income in 1974 (line 2).* Information on other family income must also be collected since this income does clearly contribute to family financial strength and may represent a considerable portion of the parental income of many Basic Grant recipients. Elements of other family income are: Income from tax exempt bonds, that portion of pensions on which no Federal income tax is required, welfare benefits, social security benefits (except those benefits paid to or on account of the student or other educational benefits paid to other members of the family), child support payments which are received for all children for whom the parents provide more than one-half support. Income of families which didn't file income tax returns, that portion of capital gains on which no Federal income tax is required, etc.

3. *Parents' annual adjusted income in 1974 (line 3).* Parents' annual adjusted income is the sum of parents' adjusted gross income (line 1) plus other family income (line 2).

4. *Parents' Federal income tax paid for 1974 (line 4).* The legislation requires that a deduction be made, from annual adjusted income, for the amount of Federal income tax paid on income received during the base year.

5. *Effective family income in 1974 (line 5).* The result of subtracting Federal income tax paid (line 4) from the annual adjusted income (line 3) is effective family income and is the base for calculating expected contribution from parental income.

6. *Family size offset (line 6).* In addition to taxes, a family has basic subsistance expenses which must be met before any contribution from income can be expected. These expenses will vary depending on size of the family involved. For purposes of the basic grant, the "Weighted Average Thresholds At the Low Income Level," developed by the Social Security Administration and published by the Bureau of the Census, have been used as a reasonable approximation of basic family expenses.[3] These expenses are based on the food costs of a family of a given size, and make certain assumptions about the additional expenses of shelter and other family needs.

The data are revised annually, and thus can be used to update the family contribution schedules from year to year. The figures supplied by the Bureau of the Census have been incremented by 8.8 percent to reflect estimated cost of living increases from the fall of 1972 to the present, and then rounded to facilitate calculation. The resulting figures have been called "Family Size Offsets." Their derivation is illustrated below:

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[1] Reference numbers are keyed to the line numbers in preceeding summary.

[2] Orwig and Jones, "Can Financial Need Analysis Be Simplified?" The American College Testing Program, Iowa City, Iowa, 1970—p. 11.

[3] From "Weighted Average Thresholds At the Low Income Level" in 1972 by size of family and sex of head, by farm-nonfarm residence; current population reports, consumer income, characteristics of the low-income population; 1972 series p. 60, No. 88, June 1973.

FAMILY SIZE OFFSETS

Family size	Dollar Amount
2	3050
3	3650
4	4650
5	5500
6	6200
7	6900
8	7600
9	8300
10	9000
11	9700
12	10400

7. *Unusual expenses (line 7)*. The basic Grant program is required by law to take into consideration two kinds of unusual expenses, those arising from a "catastrophe" and "unusual medical expenses." It is proposed to use the Internal Revenue Service definitions of medical and dental expenses and casualty loss in determining "unusual expenses" for the Basic Grant program. The use of Internal Revenue Service definitions avoid the need for creating a new definition of expenses which would be used only by the Basic Grants program. However, some distinction must be made between expenses which may be itemized for income tax purposes, and those itemized expenses which are "unusual" as used for the Basic Grant legislation.

For purposes of the Basic Grant program, those items which may be included as unusual expenses are:

1. Those medical and dental expenses (not compensated by insurance or otherwise) which may be listed as "medicine and drugs" on line 2 of Schedule A, Form 1040 of the Internal Revenue Service and those expenses which may be listed as "Other Medical and Dental Expenses" on line 6 of Schedule A, Form 1040. The gross amount of all such medical, dental and drug expenses is to be used in the Basic Grant calculation.

2. Those casualty or theft loss(es) permitted by the Internal Revenue Service (Form 1040, Schedule A, line 29).

The amount of unusual expenses which may be deducted from effective family income (line 5 of this illustration) is that amount of unusual expenses (as defined above) in excess of 20 percent of effective family income. This exclusion is designed to confine claims for such expenses to those which are genuinely unusual.

8. *Employment expense offset (line 8)*. In constructing budgets which recognize expenses for families, due provision must be made for the expenses of the breadwinner which occur as a result of employment itself. Some expenses for clothing, transportation, and other items are attributable to occupational needs. When both parents work, additional employment expenses are incurred. Also, if a household is headed by a single parent, the costs associated with that employment are greater than for a comparable worker who has the economic advantage of a nonemployed spouse. Therefore in the determination of family contribution an "Employment Expense Offset" has been constructed to treat more equitably the income of the two parent family where both parents work, or the single parent household. It is recognized that both of these types of families will occur frequently in the lower income families where Basic Grant eligibility is greatest. The offset provides that 50 percent of the earnings of that parent with the lesser earnings, or 50 percent of the earnings of the single parent, will be protected from any contribution toward education. The maximum offset is $1,500 and would thus assure that up to $30 a week would be available for the additional expenses which these parents face.

9. *Total offset against income (line 9)*. The sum of line 6 (family size offset) plus line 7 (unusual expenses) plus line 8 (employment expense offset) is the total amount which can be deducted from effective family income (line 5) in order to determine discretionary parental income.

10. *Discretionary income (line 10)*. The income which remains after allowance has been made for family living expenses, Federal income taxes, unusual expenses and the employment expense offset may be identified as discretionary income. This income is available for the purchases of goods and services which enhance the standard of living of the family including the cost of postsecondary education.

11. *Standard income contribution (line 11)*. A contribution of 20 percent is expected from the first $5000 of discretionary income. When discretionary income exceeds $5000, the expected income contribution is $1000 plus 30 percent of the amount in excess of $5000. The contribution rates will generally be at the 20 percent level for most of the income range where Basic Grant eligibility will occur.

These contribution rates appear reasonable in terms of the several demands made on family income, especially in light of the fact that the cost of supporting the student for the academic year is included in the cost of education and does not have to be met from the general budget resources.

12. *Effective income of the student (line 12)*. For purposes of the Basic Grants program, the enabling legislation requires that effective income of the student is: That amount of social security benefits paid to or on behalf of a student because he is a student; and one-half of that amount of veteran's readjustment benefits and/or war orphan's benefits (exclusive of dependency allowances) paid to or on behalf of a student because he is a student. In both cases, the amount is the total to be received during the academic year for which Basic Grant assistance is requested. Veteran's dependency allowances are clearly not for the support of the Veteran himself. Therefore they are included with, and given the same treatment as, "effective family income."

13. *Adjustment of effective income of the student for negative income (line 13)*. In the event that the family has a negative income, that is, if the effective family income is less than the various offsets against income, the support of basic family needs must be given priority over the support of postsecondary education. Therefore, the effective income of the student may be decremented by the amount of the negative income before effective income is added into family contribution. In the event that the negative income of the parents exceeds the effective income of the student, the amount of the excess is preserved to be subtracted from any contribution from parental assets as calculated below.

14. *(line 14)*. Subtract line 13 from line 12 to obtain the difference between the effective income of the student and the discretionary income of the family.

15. *(line 15)*. If line 14 is a negative amount, enter 0; if line 14 is a positive amount, enter it as the effective income component of the family contribution.

16. *Net assets of parents (line 16)*.—For purposes of Basic Grants, the following types of assets will be considered: Equity in farm, business, home, other real estate, stocks, bonds, other investments, savings accounts, etc. Since equity is being measured, debts against the stated assets will be deducted in evaluating the net worth of these assets.

17. *Available parental assets (line 18)*.—In order to determine the amount of parental assets which can be assessed for contribution for educational purposes, an asset reserve of $7,500 is subtracted from the net assets of parents. Since families accumulate assets for several purposes including retirement, future consumption, the postsecondary education of their children and the provision of an economic buffer in the event of catastrophe, some portion of assets should be reserved from any contribution toward postsecondary education, and remaining assets be assessed at some rate less than 100 percent. A review of the net asset positions of the 1973–74 Basic Grant recipients indicates that $7500 is an adequate reserve since it appears that the average home equity for Basic Grant applicants is this amount. In addition, the $7,500 amount would allow for emergencies and retirement needs.

Subtracting line 17 (asset reserve) from line 16 (net assets of parents) results in available parental assets.

18. *Asset assessment rate (line 19)*.—Once the available parental assets have been determined, a contribution rate of 5 percent will be assessed on the parents' net worth in excess of $7,500. Because the value of assets grows, this rate of asset assessment will generally leave the family's asset position largely unimpaired.

A 5% rate is equal to or below current real estate and savings account appreciation rates, and therefore seems reasonable.

19. *Standard contribution from parental assets (line 20)*. Multiplying available parental assets (line 18) by 5% results in the standard contribution from parental assets. The total measure of available family resources in a particular year is the assessment of both income and assets of the family. This procedure takes into consideration the interdependent relationship between assets and income. In the event that there is a negative assessment of income (e.g. there exists offsets (line 9) exceeding total effective income (line 5)), the amount of negative assessment should be taken into account when determining the total measure of available family resources. This can be accomplished by offsetting the standard asset contribution by that amount which the negative income exceeds the effective income of the student. Entering the standard parental asset component in line 20 allows for this offset to occur.

20. *(line 21)*. Entering line 14 (the difference between effective income of the student and the discretionary income of the family) allows for the offset against the contribution from family assets. If line 14 is 0 or positive, enter 0.

21. *(line 22)*. Subtracting line 21 (offset against contribution from assets) from line 20 (parental asset contribution) results in the component of contribution from family assets.

22. *Standard Contribution from parental income and assets.* (line 23). Adding line 11 (parental income contribution) to line 22 (parental asset contribution) provides the parental income and asset components of the family contribution.

23. *Multiple student adjustment (line 24)*. Adding the parental income contribution to the parental asset contribution and the other parental asset contribution results in the expected contribution from parents with one family member in postsecondary education. Some adjustments must then be made for those families in which more than one family member will be enrolled in postsecondary education for the academic year 1975–76.

Since each student has an allowance for costs of attendance, the family's discretionary income is effectively increased when

there is more than one family member in postsecondary education. In order to determine the appropriate percentages, the contributions expected from different family sizes were compared. These investigations indicated that 140 percent of the contribution for one child would be a reasonable assessment against the family with two students. Thus, each student would receive 70 percent of the contribution which the family would make if there were only one student in the family. Similarly, 150 percent of the single student contribution seemed adequate for the family with three children in postsecondary education; each student could expect 50 percent of the single student contribution. For families with four or more students, each family will be assessed 40 percent of the single student contribution for each child in postsecondary education.

The following table summarizes the treatment of families with different numbers of family members in postsecondary education:

Number of students	Contribution per student as a percent of standard contribution	Family contribution for all students as a percent of standard contribution
	Percent	*Percent*
1	100	100
2	70	140
3	50	150
4 or more	40	160+

24. *Net assets of the student* (*line 25*).—The applicant net assets would be defined in the same fashion as the assets of the parents. Debts against these assets would be deducted. Trust funds in the student's name would be included.

25. *Student asset contribution* (*line 26*).—In determining a fair treatment of student assets the theory of the major need analysis systems has been followed; i.e., that because the student himself is the direct beneficiary of postsecondary education, he should be expected to invest a greater portion of his resources in meeting his educational costs than should be expected from his parents.

For the Basic Grants program, one-third of the student's assets (recalculated each year) would be expected. This method is simple and provides a modest reserve for the student.

The result of multiplying the student's net assets (line 25) by the student asset assessment rate (.33) is that amount expected from student assets for educational purposes.

26. *Total family contribution* (*line 27*).—The total expected family contribution for a dependent student is determined by adding line 15 plus line 24 plus line 26.

EXPECTED FAMILY CONTRIBUTION FOR INDEPENDENT STUDENTS, ACADEMIC YEAR 1975–76

Summary of Calculations

1. Adjusted gross income of applicant (and spouse) in 1974 ______
   a. Amount earned by applicant ______
   b. Amount earned by spouse ______
2. Other family income in 1974 + ______
3. Annual adjusted family income of applicant (and spouse) (line 1 + line 2) = ______
4. Federal Income Tax Paid for 1974 − ______
5. Effective family income = ______
6. Family size offset (table 1) + ______
7. Unusual Expenses + ______
8. Employment expense offset (table 3) + ______
9. Total offsets against income (lines 6+7+8) = ______
10. Discretionary income (line 5 minus line 9) = ______
11. If line 10 is a positive amount, enter that amount. If line 10 is a negative amount, enter 0 ______
12. Multiply discretionary income of line 11 by applicable rate to obtain standard contribution (table 4) ______
13. Effective income of student ______
14. If line 10 is a negative amount, enter as a positive number; otherwise enter 0 ______
15. Subtract line 14 from line 13. (May be a negative amount) ______
16. If line 15 is positive, enter as contribution from effective income of student. If line 15 is negative or 0, enter 0 as contribution from effective income of student ______
17. Determine net assets of applicant (and spouse) ______
18. Multiply amount of assets of applicant (and spouse), entered in line 17 by 0.33 to obtain standard contribution from assets ______
19. If line 15 is a negative number, enter as a positive number; otherwise enter 0 ______
20. Subtract line 19 from line 18 to obtain standard contribution from student assets. If negative number, change to 0 ______
21. Add lines 12 and 20 to obtain standard contribution from income and assets ______
22. Multiply standard contribution by multiple student rate to determine expected family contribution for each member in postsecondary education (table 2) ______
23. Student Eligibility Index equals sum of lines 16 and 22 ______

EXPECTED FAMILY CONTRIBUTION FOR INDEPENDENT STUDENTS ACADEMIC YEAR 1975–76

Explanation of calculations.[1] For the purposes of the Basic Grants program, independent (self-supporting) student status may be claimed if the applicant:

(1) Has not been and will not be claimed as an exemption for Federal income tax purposes by any person except his or her spouse for the calendar year(s) in which aid is received and the calendar year prior to the academic year for which aid is requested, and

(2) Has not received and will not receive financial assistance of more than $600 (in cash or kind) from his or her parent(s) in the calendar year(s) in which aid is received and the calendar year prior to the academic year for which aid is requested, and

(3) Has not lived or will not live for more than two consecutive weeks in the home of a parent during the calendar year(s) in which aid is received and the calendar year prior to the academic year for which aid is requested.

Once a student has been determined to meet these criteria and is defined as an independent student, his expected family contribution is calculated according to the process outlined below.

1. *Adjusted gross income of applicant* (*and spouse*) (*line 1*). All income which is available to the applicant (and spouse) should be considered in the evaluation of ability to support the cost of postsecondary education. The most valid reference for taxable income is the adjusted gross income item in the Federal income tax return. This information is readily available and can be verified by referring to the IRS forms actually filed.

The decision as to which year's income is to be considered is a difficult one for independent students. Traditionally, a student's income may vary considerably from year to year. While it may be preferable to ask the student to estimate his earnings for the current year, obtaining realistic projections of earnings would not be possible without establishing counseling centers where students could be assisted in preparing this information.

Because this is not feasible at this time, it has been determined that the adjusted gross income to be considered is that amount entered on the previous year's Federal income tax form.

This also has the advantage of being consistent with the data collected for dependent students and assures that the family contribution of all students is determined from the same base.

2. *Other income of the independent student* (*line 2*). Information on other income of the independent student must also be collected since this income does clearly contribute to financial strength and may represent a considerable portion of the income of many Basic Grant recipients. Elements of other income are: Income from tax exempt bonds, that portion of pensions on which no Federal income tax is required, that portion of capital gains on which no Federal income tax is required, welfare benefits, social security retirement, that portion of the veteran's benefits attributable to the dependents of the veteran, child support payments, veteran's disability, income of persons who did not file income tax returns, etc.

3. *Annual adjusted family income of applicant* (*and spouse*) (*line 3*).—Annual adjusted family income is the sum of adjusted gross income (line 1), and other family income (line 2).

4. *Federal income tax paid by applicant* (*and spouse*) (*line 4*). The legislation requires that a deduction be made, from annual adjusted income, for the amount of Federal income tax paid on income received during the base year.

5. *Effective family income* (*line 5*). The result of subtracting Federal income tax paid (line 4) from the annual adjusted family income (line 3) is effective family income.

6. *Family size offset* (*line 6*). In addition to taxes, there are basic subsistence expenses which must be met before any contribution from income can be expected. These expenses will vary depending on the size of the family involved. For the single independent student, this offset is $850 which covers the student's summer living expenses. Using the same base for deriving family size offsets as is used for multiple member families (weighted average thresholds at the low-income level) and adjusting for an 8.8 percent increase in the cost of living, the family size offset for a single member family is $2,361 per year. Generally, a student is in school for approximately 65 percent of the year (two 16-week semesters plus a 2-week break between semesters). Since his expenses during this 34-week academic year are covered in his cost of attendance, the $850 offset provides for his expenses during that period of time when he is not in school.

For married independent students and those with additional dependents, the family

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[1] Reference numbers are keyed to line items of preceding summary.

size offset is the same as that for the parent's of dependent students:

FAMILY SIZE OFFSETS

Family size	Dollar amount
2	3,050
3	3,650
4	4,650
5	5,500
6	6,200
7	6,900
8	7,600
9	8,300
10	9,000
11	9,700
12	10,400

7. *Unusual expenses (line 7)*.—The Basic Grants program is required by law to take into consideration at least two kinds of unusual expenses, those arising from a "catastrophe" and "unusual medical expenses." It is proposed to use the Internal Revenue Service definitions for medical and dental expenses and casualty loss(es) to constitute "unusual expenses" for the Basic Grants program. The use of Internal Revenue Service definitions avoids the need for creating a new definition of expenses which would be used only by the Basic Grants program. However, some distinction must be made between expenses which may be itemized for income tax purposes, and those itemized expenses which are "unusual" for Basic Grants.

For purposes of the Basic Grants program those items which may be included as unusual expenses are:

1. Those medical and dental expenses incurred during the base year (not compensated by insurance or otherwise) which may be listed as "medicine and drugs" on line 2 of Schedule A, Form 1040 of the Internal Revenue Service and those expenses which may be listed as "Other Medical and Dental Expenses" on line 6 of Schedule A, Form 1040. The gross amount of all medical, dental and drugs expenses may be listed.

2. In addition, these casualty or theft loss(es) incurred during the base year permitted by the Internal Revenue Service (Form 1040, Schedule A, line 29).

The amount of unusual expenses which may be deducted is that amount of unusual expenses (as defined above) in excess of 20 percent of the effective family income. This exclusion is designed to confine claims for such expenses to those which are genuinely unusual.

8. *Employment expense offset (line 8)*. In constructing budgets which recognize minimum expenses for families, provision must be made for the expenses of the breadwinner which occur as a result of employment itself. Some expenses for clothing, transportation, food, and other items are attributable to occupational needs. When two persons work, additional employment expenses are incurred. Also, if a household is headed by a single person, the costs associated with that employment are greater than for a comparable worker who has the economic advantage of a nonemployed spouse. Therefore, in the determination of family contribution an "Employment Expense Offset" has been constructed to treat more equitably the income of the two-person family where both persons work during the base year, or the single person who heads a household during the base year. It is recognized that both of these types of families will occur frequently in the lower income families where Basic Grants eligibility is greatest. The offset provides that 50 percent of the earnings of that person with the lesser earnings, or 50 percent of the earnings of the single head of household, will be protected from any contribution toward education. The maximum offset would be $1,500 and would thus assure that up to $30 a week would be available for the additional expenses which these persons face.

9. *Total offsets from income (line 9)*. The sum of line 6 (family size offset) plus line 7 (unusual expenses) plus line 8 (employment expense offset) is the total amount which can be deducted from effective family income (line 5) in order to determine discretionary income.

10. *Discretionary income (line 10)*. The income which remains after adjustment has been made for family living expenses, Federal income taxes, unusual expenses and the employment expense offset may be identified as discretionary income. This income is available for the purchase of goods and services which enhance the standard of living of the family, including postsecondary education.

11. *Adjusted Discretionary Income (line 11)*. Adjusted discretionary income is the discretionary income determined in line 10 and adjusted to eliminate negative amounts in the calculation of contribution from income. If the discretionary income in line 10 is a negative amount, or 0, it should be entered as a zero (0); if positive, that amount should be entered.

12. *Standard income contribution (line 12)*. Because of the direct benefits of postsecondary education received by the independent student, the expected contribution rate for such students from income has traditionally been much greater than the rate applied to the discretionary income of the parents of dependent students. In fact, the independent student has usually been expected to use all of his discretionary income for educational purposes.

In developing a system for the Basic Grants program, it was felt that a 100 percent contribution rate was excessive, especially for independent students with family responsibilities.

The following income contribution schedule was developed to accommodate these responsibilities:

(a) 75 percent of discretionary income for the single independent student with no dependents;

(b) 50 percent of discretionary income for the married independent student with no dependents other than spouse;

(c) 40 percent of discretionary income for the married independent student who has dependents other than spouse.

13. *Effective income of the student (line 13)*. For purposes of Basic Grants, effective income of the student is: That amount of social security benefits paid to or on behalf of the student because he is a student; and one-half of the amount of veteran's readjustment benefits and/or war orphan's benefits (exclusive of dependency allowances) paid to or on behalf of a student because he is a student.

In both cases, the amount is the total to be received during the academic year for which Basic Grant assistance is requested. Dependency allowances are clearly not for the support of the Veteran himself. Therefore, they are included with, and given the same treatment as, "effective family income."

14. *Statement of negative income (line 14)*. In the event that the independent student and his family have a negative income (that is the income of the independent student and spouse are less than the sum of the various offsets against income (line 9)), the support of basic family needs must be given priority over support of postsecondary education. Therefore, the effective income of the student may be decremented by the amount of the negative income before effective income is added into family contribution. Line 14 allows any negative income to be restated as a positive figure for purposes of further calculations.

15. *Subtraction of negative income from effective income of the student (line 15)*. This subtraction establishes the amount of effective income remaining after any negative income is subtracted. In the event that negative income exceeds effective income, a negative balance will remain after this subtraction. Such a negative amount is preserved for subtraction from the contribution from assets.

16. *Statement of contribution from effective income of the student (line 16)*. The amount of effective income which remains after the adjustment for negative income of the student is the contribution from effective income. This amount may be 0 (zero) or positive. It may not be a negative number.

17. *Net assets of applicant (and spouse) (line 17)*. For purposes of Basic Grants, the following types of assets will be considered: Equity in farm, business, home, other real estate, stocks, bonds, other investments, savings accounts, etc. Since equity is being measured, debts against the stated assets will be deducted in evaluating the net worth of these assets.

18. *Asset contribution rate (line 18)*. In determining a fair treatment of student assets, it has been assumed that since a student is the direct beneficiary of postsecondary education, he should be expected to invest a portion of his resources in meeting his educational costs. Therefore, one-third of the student's assets (recalculated each year) would be expected. This method is simple and provides a modest reserve for the student. The result of multiplying the student's net assets (line 13) by the student asset assessment rate (line 17) is that amount expected from student assets for educational purposes.

19. *Offset against the asset contribution of the applicant and spouse (line 19)*. Line 15 is the amount that is remaining after the offset of negative discretionary income against student effective income. It is entered here as an offset against student asset contribution.

20. *Contribution from assets of the applicant and spouse (line 20)*. The amount of the asset contribution that remains after the adjustment for negative discretionary income is that amount expected from their assets for educational purposes.

21. *Standard contribution from income and assets (line 21)*. The amount of standard contribution from the applicant's and spouse's income (line 12) and the amount of contribution from the assets of the applicant and spouse (line 20) are added here to determine the amount of expected family contribution from income and assets for Basic Grants purposes.

22. *Multiple student adjustment (line 22)*.—Adding the contribution from annual adjusted family income to the asset contribution results in the expected contribution for one family member in postsecondary education from family income and assets. Some adjustment must then be made for those families in which more than one family member will be enrolled in postsecondary education for the academic year 1975–76.

The adjustments used for the dependent student may also be used for the independent student. The use of the same adjustments for both groups of students assures consistency of treatment, and implements the general principle that a family with more than one person in postsecondary education should contribute less per person than a family with only one member engaged in such study.

23. *Total family contribution (line 23)*.—The total expected family contribution for an independent student is determined by adding line 16 plus line 22.

(Subpart 1 of Part A of title IV of the Higher Education Act of 1965, as amended (20 U.S.C. 1070a))

[FR Doc.74-14926 Filed 6-26-74;11:06 am]

Title 45—Public Welfare

CHAPTER I—OFFICE OF EDUCATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PART 190—BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM

Expected Family Contribution for Academic Year 1974–75

A notice of proposed rulemaking was published in the FEDERAL REGISTER on September 24, 1973 (38 FR 26660), to amend subparts C and D of part 190 of Title 45 of the Code of Federal Regulations dealing with the Family Contribution Schedules for the Basic Educational Opportunity Grant Program. Such amendments were to apply for academic year 1974–75. The key provisions of these amendments were essentially as follows:

1. Subpart C set forth methods to be used in determining the expected family contribution for dependent students, which is used in determining a student's grant under the Basic Educational Opportunity Grant Program. It established the procedures for determining the expected family contribution from parental income and assets, including the allowances to be made against income and assets and the rates of contribution against income and assets after such allowances have been made, and the expected contribution from the effective income of the dependent student and from the dependent student's assets.

2. Subpart D set forth the methods to be used in determining the expected family contribution for independent students. It established the definition of the independent student and further set forth procedures for determining the expected family contribution from the effective income of the independent student, the contribution from the income of the independent student, including allowances against such income and the rates of contribution to be used in determining the contribution from the income after the allowances have been made, and the rates to be used in determining the contribution from the assets of the independent student.

Interested parties were invited to submit written comments, suggestions, or objections with regard to the proposed Family Contribution Schedules. In addition, as required by § 411(a)(3)(A)(ii) of the Higher Education Act of 1965, as amended (20 U.S.C. 1070a(a)(3)(A)(ii)), the schedules were submitted to the President of the Senate and the Speaker of the House.

Hearings on these Schedules were held by the Senate Subcommittee on Education on October 11, 1973, and by the House Special Subcommittee on Education on November 30, 1973. During both of these hearings, the Congressional comments centered around four major issues in the Schedules: the treatment of assets; the treatment of effective income of the student; the level of the family size offsets; and, the treatment of other assets.

The major concern expressed regarding the treatment of assets concerned those families with farm or small business assets as well as those families with a significant equity in their homes. It appears that in a large number of such cases, these families have a relatively high asset position and low annual incomes. The proposed Schedules did not sufficiently accommodate families in this type of financial situation. As a result of the Congressional comments, the asset treatment was modified. The modification provides that in those cases where the allowable deductions from income (Federal taxes, living expenses, unusual expenses, employment expenses) exceed the family income, a deduction is made from the contribution from assets in an amount equal to the amount by which the allowable deductions from income exceed that income. This amount is called "negative discretionary income". This adjustment will provide a more equitable treatment for those low-income families with a relatively high asset position.

With regard to the treatment of effective income of the student, the problem appears to be that, in many instances, social security benefits represent the primary source of income for the family. In the very lowest income group, these benefits are often the sole source of family income.

It should also be noted that effective income of the student, as specified in the legislation, includes both social security benefits and benefits from the Veterans Administration. As such, any modification proposed to alleviate the problems affecting social security recipients will have the same impact on recipients of veterans educational assistance. However, the objections to the treatment of V.A. benefits were minimal.

While it was determined that this issue must be thoroughly examined before any long-term solution could be reached, the Schedules have been modified to provide a more equitable treatment of effective income of the student. This change will provide for a treatment which is similar to that utilized in the treatment of assets. In those cases where there is negative discretionary income, a deduction will be made from the effective income of the student to offset this negative amount.

However, in those cases where there is negative discretionary income and an expected contribution from both assets and effective income of the student, the deduction will be first taken from effective income of the student.

The comments on the family size offset dealt with the base data used to determine the level of these offsets. The base used in the proposed Schedules is the "Weighted Average Thresholds at the Low-Income Level" developed by the Social Security Administration. It was suggested that as an alternative, the base for determining the family size offsets be the Bureau of Labor Statistics low-income thresholds.

However, it was determined that it would be best to continue using the social security base for the following reasons. First, this base is currently being used to determine need for other Federal programs such as Title I, ESEA. Second, maintaining the system utilized in the Schedules and increasing the family size offsets by using the BLS data would make the Family Contribution Schedule for Basic Grants far more liberal than any of the need analysis systems currently in use. Finally, given the overriding concern regarding the early approval of the Schedules, it was determined that such an extensive revision in the formula could not be accomplished in a timely enough manner to achieve the early decisions necessary for the success of the Program.

The family size offsets utilized in the Family Contribution Schedules for 1974–75 have been increased by 8.8 percent, which represents the rise in the Consumer Price Index for 1973.

Finally, as a result of both the comments received and the statistical data collected on 1973–74 Basic Grant applicants, it was determined to eliminate "other assets" from the Family Contribution Schedule.

These modifications were presented to the Congress and both the House and the Senate approved the Schedules with these changes.

In addition to the comments received in the Congressional Hearings, comments were received from the public. These comments primarily dealt with the four issues discussed above.

Other comments were received which discussed such aspects of the Schedules as the treatment of independent students, student earnings, and the comparison of the results of the Schedules with the results of other need analysis systems. At the present time, we do not have sufficient experience in the operation of this program to determine whether the changes should be made in line with these comments.

However, the Family Contribution Schedules are required to be submitted annually and, therefore, there will be an opportunity to make further modifications on the basis of these comments if subsequent experience shows that such modifications are necessary.

The Family Contribution Schedules as published, also contained some technical inaccuracies and omissions. The inaccuracies and omissions have been corrected in this publication of the regulations. There has also been some arrangement of text to give greater clarity, and deletion of text where material published was more appropriate for some other portion of the regulations.

In light of the foregoing, Subparts C and D of part 190 of Title 45 of the Code of Federal Regulations are amended as set forth below.

Effective Date. These regulations become effective August 1, 1974.

C. General Administrative Problems With Needs Tests.

1. Needs test for WICHE aid

The examination of the needs tests developed by the College Scholarship Service and the U.S. Department of Health, Education and Welfare demonstrate the complexities of designing an equitable program of needs calculation. As previously noted, any type of arbitrary designation will inevitably adversely affect some student to the point of denial of access. Problems in administering the program would be substantial. Each applicant's case would be comprehensively analyzed, subject to administrative appeal, and vastly time consuming. Substantial amounts of additional funding would have to be made available to the Commissioner's office for program administration. The impact of a needs test would be to discourage students from applying for WICHE aid, primarily because of the loss of parental financial privacy incurred. The hardest hit would be the middle-income family--from which most of our health manpower comes. Moreover, the state health manpower situation would probably be adversely affected because the incentive to return to the state would be reduced.

Administrative problems of a needs test for WICHE aid within the structure of the Western Interstate Compact for Higher Education would remain uncertain. The current administrative procedure mandates payment to the Western Interstate Commission for Higher Education from Montana in the full amount. The receiving state is then paid directly from WICHE (in Boulder, Colorado). Because the initial payment to WICHE must be in the full support payment amount, the student would have to pay the State of Montana the difference between the WICHE mandated support payment and the financial need figure. This initial capital investment required would probably discourage

more students from applying for aid and adversely affect the manpower situation. Receipt of student payments would take more administrative time and require more administrative appropriation. The effect of a needs test on the preferential treatment WICHE students receive in graduate admissions is uncertain. If the entire support payment were not received, the impact would obviously be adverse.

2. Student Loan Program

A Student Loan Program would probably not require a financial needs test. Loan programs have successfully operated in other states (as well as the Montana University System) without a needs test, and there is no reason why the initiation of a student loan program as a supplement to WICHE aid would require one. The loan program would be relatively easy to administer and probably would not require much administrative expense.

SYNOPSIS OF THE WICHE FINANCIAL NEED STUDY

The WICHE Study has three primary components:

A. Technical report based on a survey of all the WICHE students.
B. Manpower needs and Options for Montana.
C. Methodology of Financial Need Assessment Procedures.

A. Characteristics of WICHE Students - N=132

1. Approximately 82% are male and 18% are female.

2. Approximately 78% of the WICHE students are attending institutions in Colorado, Oregon, and Washington.

3. Approximately 75.8% of the students are enrolled in medicine, dentistry, and veterinary medicine.

4. Approximately 55% are single, 42% married and 2% are divorced.

5. The number of dependents supported are:

   0 - 57.6%
   1 - 28.0%
   2 - 7.6%
   3 - 3.0%
   4 - 3.0%
   5 - 0.8%

6. The mean age of WICHE students is 24.008

7. The distribution of the father's occupation is as follows:

   Professional and Technical - 24.2%
   Farmers - 20.2%
   Managerial - 13.7%
   Sales - 6.5%
   Craftsman - 5.6%
   Operatives - 5.6%
   Service - 7.3%
   Farm Labor - .8%
   Retired or Unemployed - 16.1%

8. The average annual total cost, including direct and indirect costs, was $6382.19

9. The average direct cost (defined as the sum of registration fees, books, laboratory fees, etc.) was $2,165.88, broken down as follows:

Registration fees -	1,528.568	70.5%
Books -	536.364	24.7%
Other -	100.955	4.8%

10. The average indirect cost (defined as housing, food, medical expense, transportation, clothing, etc.) was $4,216, broken down as follows:

Housing -	$1,304.65
Food -	832.50
Medical & Dental -	175.85
Transportation -	513.90
Clothing -	228.30
Child support -	6.44
Recreation -	271.54
Other -	883.12
Total indirect -	$4,216.30

11. The WICHE students financed their education from the following sources:

Personal earnings -	30.96%
Parental contribution -	12.74%
Scholarship (excluding WICHE)	9.09%
Loans	27.51%
Government programs:	
Social Security	0.50%
A.D.C.	0.30%
G.I. Bill	1.62%
Vocational Rehabilitation	0.00%
WICHE Student Exchange Program	28.33%(1)
Other government programs	0.63%
Other	4.30%

(1) The WICHE amount represents the inputed value of the fees waived under the WICHE agreement.

12. The parental income of WICHE students average $14,050. The breakdown by occupation is:

Professional/technical -	$19,387.50
Farmer -	13,193.75
Managerial -	17,013.33
Sales -	10,900.00
Craftsman -	13,500.00
Service -	11,048.00
Farm Labor -	10,000.00

13. The average personal indebtedness of WICHE students upon graduation is $8,675.

a. The breakdown by number of dependents is:

0 - $ 7,421.75
1 - 10,087.87
2 - 10,911.11
3 - 9,500.00
4 - 13,733.33
5 - 10,000.00

b. The breakdown by father's occupation:

Professional and Technical - $ 6,814.58
Farmer - 10,587.54
Managerial - 9,609.37
Sales - 7,833.33
Craftsman - 11,214.28
Service - 6,257.14
Farm labor - 7,366.66
Retired or unemployed - 12,000.00

Average 8,675.00

B. Manpower Needs

1. The primary purpose of the WICHE program is to provide "educational opportunity".

a. The "financial assistance" aspect is a secondary goal. WICHE funds are not distributed to the student but rather directly to the receiving institution.

2. There are only thirteen states with a lower physician-patient ratio than Montana. There are only 53 speech therapists, 33 physical therapists, and 17 occupational therapists in the state--professions that are vital to stroke patient rehabilitation.

The Montana Commission on Postsecondary Education noted in its Technical Report on Health Care Education that:

> "Maldistribution of health care personnel....is generally the most serious deficiency in Montana's health care delivery system, especially as it relates to rural areas."

3. Alternatives to WICHE.

   a. Build our own state facilities and develop our own programs in those areas where educational opportunity is difficult and our need is great. This would be the surest route to insuring educational opportunity. However, it would be extremely costly, i.e., medical facilities require close to $100 million. University of Minnesota recently completed a dental school at a cost exceeding $70 million.

   b. Expand Montana's participation in cooperative programs with other states and institutions.

      (1) WAMI is an example of this approach as is our cooperative arrangement with the University of Minnesota with the rural dentistry program.

   c. Initiate a loan program so that money could be made available to students who are or could be admitted to institutions outside the WICHE region. The amount required would be fairly close to the WICHE support price. The advantage would be that it may open the doors of educational opportunity to a few more Montana students.

   d. Indenturing the services of WICHE students does not appear to be a viable alternative. (See pages 60-61 of the special report.)